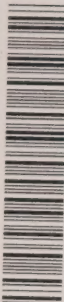


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Ontario

ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 402

DATE: Tuesday, October 27, 1992

BEFORE:

A. KOVEN Chairman

E. MARTEL Member

FOR HEARING UPDATES CALL (COLLECT CALLS ACCEPTED) (416)963-1249

EARR
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2300 Yonge St., Suite 709, Toronto, Canada M4P 1E4



HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of a Notice by The Honourable
Jim Bradley, Minister of the Environment,
requiring the Environmental Assessment
Board to hold a hearing with respect to a
Class Environmental Assessment (No.
NR-AA-30) of an undertaking by the Ministry
of Natural Resources for the activity of
Timber Management on Crown Lands in
Ontario.

Hearing held at the Civic Square,
Council Chambers, 200 Brady Street,
Sudbury, Ontario on Tuesday, October
27, 1992, commencing at 9:05 a.m.

VOLUME 402

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member



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I N D E X O F P R O C E E D I N G S

ARGUMENT:

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Swenarchuk (cont'd))	68804-68910
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Swenarchuk (cont'd))	68948-68969

1 ---Upon commencing at 9:05 a.m.

2 MADAM CHAIR: Good morning, Ms.
3 Swenarchuk.

4 Before we continue with listening to your
5 argument, the Board has considered the request that was
6 made by Forests for Tomorrow and associated with that
7 is correspondence we received from Mr. Cassidy with
8 respect to more information about forest management in
9 the U.S. Forest Services national forest.

10 We are going to rule that we will not
11 accept this information. The evidentiary phase of the
12 hearing is over. We don't believe that there is any
13 information in either of these letters that
14 particularly adds anything new or clarifies the
15 situation in the U.S. forest with respect to our
16 deliberations and for that reason we are not going to
17 give this material an exhibit number.

18 MS. SWENARCHUK: May I proceed?

19 MADAM CHAIR: Yes.

20 CONTINUED ARGUMENT BY MS. SWENARCHUK:

21 Good morning, Madam Chair and Mr. Martel.

22 In an attempt to respond to Mr. Martel's
23 questions from yesterday I will spend more time than I
24 had planned on environmental effects, but we will
25 finish, we will finish.

1 Just a number of preliminary comments.
2 What I am going to attempt to do for you today is to
3 assist you by providing an overall summary and
4 organization, I hope, of the evidence and arguments
5 advanced by Forests for Tomorrow with respect to
6 environmental effects and the conclusions that we ask
7 you to draw from those.

8 Just in a very preliminary way, we are
9 talking about evidence led on theory, first of all, by,
10 for example, Dr. Hutchinson. That includes ecological
11 effects of clearcutting, full-tree logging, those kinds
12 of issues that we will come back to, then actual
13 effects observed and documented by our lay witnesses by
14 Mr. Marek and Mr. Benson.

15 If you will recall, Volume 1 of Mr.
16 Benson's witness statement included analyses of many of
17 the theories and issues involved in this case. The
18 second volume of his witness statement, and this is
19 1604A and B, to do with observed effects on 19
20 management units which we will come back to discussing
21 later.

22 Then you may recall with regard to
23 effects of timber management on wildlife, you received
24 evidence from Dr. Bendell of FFT.

25 You also, of course, received evidence of

1 actual effects of timber management from various
2 individuals who came before you at the community
3 hearings, some of whose testimony we have compiled for
4 you in our appendix.

5 Now, with regard to your question
6 yesterday, Mr. Martel, how much of this is pre-1980,
7 the short answer to that is virtually none of it is
8 pre-1980. The only pre-80 materials that I can recall
9 in all of that were those slide that Mr. Marek showed
10 you dating from the past for the very specific purpose
11 of, for example, showing you modified cutting that was
12 done at a certain time in the past.

13 But with respect to Mr. Marek and Mr.
14 Benson, the slides taken and the effects described were
15 current at the time of their testimony. Some of the
16 lay witnesses took pictures literally a week before
17 they came to the hearing and I believe also Dr. Bendall
18 talked about impacts of the current approach to
19 wildlife management.

20 In fact, virtually all of that evidence
21 is post-1988 from dates after the commencement of the
22 hearing.

23 Now, in order to organize or assist you
24 in organizing the concepts and the evidence with regard
25 to environmental effects I would like to give you a

1 kind of table of contents to how our written argument
2 deals with these issues.

3 We are talking about environmental
4 effects in two very large categories. One has to do
5 with effects on the timber resource and the
6 sustainability of the resource and the other has to do
7 with effects on everything else. So let me just try to
8 give you a table of contents to the argument.

9 Because, of course, these effects are so
10 intertwined many different ways of organizing it could
11 be used and this is one that I hope will assist you.

12 At pages 156 and following of the
13 argument is a description of environmental effects of
14 timber management. As a subset of that, starting at
15 page 169 and following, is the argument with regard to
16 potential environmental effects of full-tree logging.

17 Then from pages 374 and following are
18 actual environmental effects disclosed in monitoring
19 reports, then at pages 240 and following in Volume 2 we
20 have a comparison of natural disturbance or the effects
21 of natural disturbance with the effects of harvest,
22 particularly clearcut and that's a combination of
23 evidence of factual slides, photographs, presented to
24 you and scientific theory about the issue.

25 At pages 248 and following we have a

1 discussion of the evidence of ecological disadvantages
2 of large cuts and artificial regeneration and
3 advantages to smaller cuts and natural regeneration.
4 There is a further discussion of that subject,
5 advantages of modified cutting and natural
6 regeneration, at pages 256 and following and then at
7 page 260 we offer conclusions on those issues.

8 Then with regard to the overall issues of
9 wood supply sustainability, which of course are
10 connected to the subjects I have already mentioned -
11 this is how the table of contents would look - at page
12 185 and following we have a discussion of wood supply
13 and issues of sustainability.

14 Then we attempted to compile and analyse
15 what evidence you have received of actual regeneration
16 efforts and results in the hearing. So at page 205 and
17 following we have MNR evidence of current regeneration
18 results; page 212, OFIA evidence on the same subject;
19 at page 213, the evidence of long-term results of
20 artificially regenerating stands and that includes the
21 SOARS 1 and 2 reports on the Marek plantations.

22 At 223 is our argument regarding the
23 alleged superiority, as we call it, of artificial
24 regeneration; at 227, issues of regeneration and
25 government cost. Government cost is one of the

1 economic elements, economic effects of timber
2 management, I would suggest, and then as a subset of
3 that, at page 229 we discuss the silvicultural cost
4 exercise and at page 235 the FFT illustrative cost
5 method analysis.

6 I intend this morning to essentially go
7 through that list organized in that way.

8 Now, it is the FFT position that timber
9 management has environmental effects on terrestrial and
10 aquatic ecosystems and on the socio-economic
11 environment.

12 It is the MNR position that these effects
13 can be avoided, mitigated or minimized sufficiently for
14 purposes of environmental protection.

15 It is the FFT position that current
16 practices characterized still, we will argue, by large
17 area clearcutting and an emphasize on artificial
18 regeneration treatment and the use of large and heavy
19 equipment is having negative effects on the
20 environment, both actual, such as impacts on non-timber
21 values, hydrological impacts, and potential ones and
22 this concerns subjects as full-tree logging, nutrient
23 depletion and acidification, that these effects impact
24 on both the timber resource and non-timber values and
25 that there is evidence before the Board sufficient for

1 the Board to find that changes in these practices are
2 necessary to ensure environmental protection of
3 terrestrial and aquatic ecosystems, including the
4 timber resource and non-timber values, and the
5 socio-economic environment.

6 It is the position of Forests for
7 Tomorrow that effects on forest ecosystems, the
8 terrestrial and aquatic ecosystems, are linked to
9 effects on wood supply and sustainability because only
10 the perpetuation of healthy forest ecosystems will
11 sustain the regeneration of the forest for all its
12 values.

13 To put it briefly, it is the position of
14 FFT that ecologically and economically a change to
15 smaller cuts with diversity as required for protection
16 of biodiversity and more natural regeneration is
17 necessary to eliminate the range of negative effects
18 associated with large cuts and to ensure long-term
19 sustainability of the timber resource and non-timber
20 values.

21 Now, an underlying my premise in all of
22 this, of course, is that cuts in Ontario are still
23 large and I want to review evidence that you have
24 received with regard to that subject from five sources:
25 From Mr. Benson's study, from the clearcut exercise,

1 from the evidence of Ms. Patton Lodge Lindsey, from Mr.
2 Tim Gray and from MNR reply evidence.

3 Now with regard, first of all, to Mr.
4 Benson's evidence, you will recall that he surveyed 19
5 management units and in our submission there is
6 considerable uncontradicted evidence from his study
7 with regard to environmental effects on these units.

8 This study is the only survey, to our
9 knowledge, done in Ontario regarding actual
10 environmental effects of timber management on Ontario
11 lands, certainly on this scale.

12 Now, a summary of the environmental
13 effects found by him is noted in our argument at pages
14 156 to 169 and in the wood supply section of the
15 argument, pages 193 to 195. I want to review briefly
16 some of this evidence with regard to clearcut size and,
17 first of all, I want to review the methodology.

18 We are aware that argument has been made
19 and that the evidence of Mr. Runnison suggests that a
20 more accurate method exists to conduct the type of
21 measurements that Mr. Benson made and that a degree of
22 error exists in Mr. Benson's work.

23 Having that in mind, as I said I want to
24 review the methodology that he used. It is described
25 in pages 155 to 157 that he used LANDSAT imagery,

1 analyses of actual management plans, other additional
2 information and field inspections.

3 To summarize his testimony to you about
4 how he used the LANDSAT imagery, he indicated that he
5 used the satellite photographs essentially as maps for
6 the area. That's at Volume 274, page 49,305.

7 He got a sense from the LANDSAT
8 photographs of what was there and then he went and
9 looked and he also looked at the plan and he looked at
10 other information obtained from the Ministry, and you
11 will recall that he indicated to you that at times the
12 Ministry was not very forthcoming with information.
13 Those issues are also in his report.

14 I think it is very important to recall
15 that field inspections were done to verify the results,
16 that he produced for your examination over 500 slides
17 of areas and effects, that he made no exaggerated
18 claims in his testimony with regard to the absolute
19 precision of the photographs, and I would refer you for
20 those elements of his testimony to pages 49,286,
21 49,301, 49,330, 49,305.

22 Also, Mr. Benson testified quite
23 forthrightly to the Board in direct testimony as to
24 what the limitations of the study were. Specifically
25 that the year of the cuts was not available to him

1 frequently, this is at Volume 291, page 48,910, and
2 that he had to estimate that.

3 I want to read to you one passage that
4 gives you an indication of what he was looking for and
5 what he found. The passage is at Volume 291, pages
6 48,911 to -12. He said:

7 "What I was trying to look for in
8 clearcut part was to find these large
9 areas for areas where the clearcutting
10 was concentrated and I think I should
11 stress right from the start that, as I
12 said, when I looked at the large cut
13 areas I didn't have the age class
14 differences or the actual ages for the
15 area which are important. The main point
16 was that most of the contiguous clearcuts
17 where you are putting together a number
18 of years in a row, in my case, comprised
19 more than the last ten years, so they
20 could go on for more than ten years. If
21 you are putting one year beside another
22 beside another year you are really ending
23 up with one large clearcut somewhere in
24 there, and what is the real size of the
25 clearcut is important and that is hard to

1 "define."

2 I want to emphasize throughout the
3 morning that the contiguous nature of the cuts is
4 central to FFT's concerns. It is not just the size of
5 individual cuts, but the contiguous nature, the large
6 areas opened up that FFT considers important in
7 creating negative environmental effects.

8 Now, further details about Mr. Benson's
9 photointerpretations and the limitations of knowledge
10 of age classes is at page 48,922 to -24 of the
11 transcript.

12 In relation to contiguous areas cut I
13 would like to remind you that throughout his
14 description of the effects of the cuts are references
15 to concern about the reduced number of age classes, and
16 that's a biodiversity concern. For example, that's
17 true with regard to the 7,000 hectare cut on the
18 Armstrong unit. At page 48,930 he indicated:

19 "The alternative to doing that type of
20 planning is -- well, would you want it to
21 come up in smaller units of forest in a
22 variety of age classes so that your
23 harvesting might be over a longer period
24 of time, but you might create conditions
25 in that forest that would be better for

1 the environmental part and for the
2 wildlife part. In other words, you
3 could, in effect, clearcut that same
4 7,000 hectares, but you could do that in
5 smaller blocks or in strips and over a
6 longer period of time in order to achieve
7 the same type of or to achieve a better
8 effect on the management of the area."

9 Now, there has been much focus in the
10 hearing and outside of it on the estimate of the Gordon
11 Cosens cut, but we want to emphasize that focus did not
12 come from Forests for tomorrow, but from the media
13 attention.

14 Now, with more resources, undoubtedly a
15 more precise survey could have been done, but the
16 Forests for Tomorrow position is that his findings from
17 the LANDSAT methodology were verified by maps and field
18 inspections and that the evidence of others supports
19 the findings of large cuts in much of this province,
20 including the Gordon Cosens area.

21 Now, I also would like to recall to you
22 that Mr. Benson under cross-examination indicated to
23 Mr. Cassidy, and this is at page 49,654, that:

24 "I don't think the Board is going to
25 accept any one party's terms and

1 conditions per se. I don't know what the
2 procedure is. I think the idea is, is to
3 present as many ideas and good ideas to
4 them so that they can make the decision
5 as to what to do."

6 That prompted Madam Chair to comment
7 that:

8 "It is very refreshing for the Board to
9 hear someone who isn't taking a strictly
10 adversarial role, Mr. Benson. Thank you.
11 The Board is impressed with the fact that
12 you are looking for the right answers for
13 the best possible solution. We are often
14 used to hearing just adversarial points
15 of view."

16 Now, I want to stress that the concern of
17 Forests for Tomorrow for large cuts including, for
18 example, the Gordon Cosens area, but others that he
19 enumerated for you in Volume 2 of his witness
20 statement, include the following considerations: The
21 reduction of biodiversity, large areas being cut and
22 therefore regenerating to only a limited number of age
23 classes.

24 Secondly --

25 MR. MARTEL: I think I raised this with

1 Mr. Lindgren that perhaps maybe you would consider this
2 when you replied or in final argument, what is the
3 effect of a multitude of small clearcuts that don't
4 emulate the fire-driven nature of the forests in
5 northern Ontario?

6 Much of the forest has come from fire.
7 They have not been small fires in many instances, and
8 how do you replicate that to get the biodiversity you
9 are talking about if you have a lot of stringent -- and
10 I noticed you dropped some of the original
11 prescriptions that you had, but restrictions to 50
12 hectares for this and 50 hectares for that or no larger
13 than a hundred hectares.

14 How do you get that sort of, as I
15 understand it anyway, pattern that's out there to be
16 replicated with a lot of small clearcuts?

17 MS. SWENARCHUK: Those are issues that I
18 will address over the morning. If I could just start
19 off with a couple of points.

20 I think when I have a chance to explain
21 to you the changes in our silvicultural planning
22 criteria you will see that we have moved to
23 establishment of a range of cuts without a limit and in
24 accordance with the needs of biodiversity. So I will
25 be submitting to you later that the move is really

1 very, very substantial.

2 Secondly, I am going to review with you
3 what we think the evidence says about fires and
4 particularly with regard to the similarities, alleged
5 similarities and, in our view, the greater differences
6 between fires and clearcuts.

7 Just in summary I would say the evidence
8 of Dr. Hutchinson and others which I will review later
9 is that, in fact, the differences between fires and
10 clearcuts are much more apparent than similarities and
11 I will be suggesting to you that even the Ministry has
12 given up its, I think, earlier position of attempting
13 to go equate the two.

14 MR. FREIDIN: Could you give us a
15 reference to where we ever said that we were equating
16 clearcuts to fire?

17 MS. SWENARCHUK: Can we wait for the full
18 discussion?

19 MR. FREIDIN: All right.

20 MS. SWENARCHUK: I am going to talk to
21 you later about something that I have called the
22 shifting sands of the Ministry's clearcut size
23 position. You can wait for that, Mr. Freidin.

24 Now, just one last comment specifically
25 with regard to the Gordon Cosens area and that is, I

1 brought for you today the clearcut exercise map that
2 pertains to the Gordon Cosens area just to demonstrate
3 to you what it showed about contiguous cuts in the
4 area. Most of their cuts, Mr. Martel, in the 80s and
5 most of them in fact in the mid to late 80s.

6 I am just going to bring it to you to
7 take a quick look at that. You may recall the clearcut
8 exercise estimated a contiguous cut in that area of
9 approximately 20,000 hectares. This is Exhibit 1014D.

10 ---Discussion off the record

11 MR. FREIDIN: I am sorry, Madam Chair. I
12 think this conversation should be on the record and
13 maybe you can turn your mike on and Ms. Swenarchuk can
14 start again.

15 MS. SWENARCHUK: All right. What I am
16 showing the Board is that we have outlined in yellow
17 the contiguous cuts that were identified in the Gordon
18 Cosens unit during the clearcut exercise.

19 I am recalling for them too that they
20 might want to look at a copy of this at their leisure,
21 that the map also indicates the years of the cuts and
22 the contiguous nature that is of concern to Forests for
23 Tomorrow.

24 It also records reserves in various
25 colours here and it is the view of Forests for

1 Tomorrow, and this is reflected in Mr. Benson's Volume
2 2 of his witness statement, that there are more
3 reserves of this type being left now than was the case
4 in the past, that the area of the reserves is too small
5 to prevent some of the ecological effects that our
6 witnesses have testified to.

7 MR. FREIDIN: Is it Mr. Benson's evidence
8 that you are saying you are referring to that some of
9 the reserves are too small to provide that protection?

10 MS. SWENARCHUK: There are statements to
11 that effect in his witness statement.

12 MR. FREIDIN: All right. When you said
13 that we marked certain --

14 MS. SWENARCHUK: Mr. Freidin.

15 MR. FREIDIN: I want to know whether when
16 you say we marked it in yellow whether you marked it in
17 yellow or is that what the exhibit did when it was
18 presented.

19 Did he mark up the exhibit or is that the
20 original exhibit?

21 MS. SWENARCHUK: It is the original
22 exhibit. We outlined the cut and anyone is welcome to
23 look at it.

24 MR. FREIDIN: So there is in evidence on
25 that.

1 MS. SWENARCHUK: I would just like to
2 direct you as well to the parts of Mr. Benson's witness
3 statements, 1604B, that records sizes observed in other
4 management units.

5 With regard to the Domtar/Armstrong unit,
6 at page 171 of the volume, he indicates that
7 contiguous cut-overs range in size, and I am
8 summarizing here, from approximately 8,500 hectares to
9 50,000 hectares. The larger cut-overs are adjacent to
10 cut-overs of other companies creating a larger
11 contiguous clearcut.

12 They are primarily clearcut with residual
13 poplar, they are not regenerated and are too large for
14 the amount of site variation that occurs, and that is
15 also a theme in FFT's concerns that, in fact,
16 management in Ontario is not site specific, that large
17 areas of considerable site variation are treated
18 uniformly as regards to harvest.

19 In the Mattawin/Doing River FMA, at page
20 187 of his report, he reports contiguous cut-overs
21 observed up to 11,000 hectares and further at page 188,
22 regeneration is not keeping up with the harvested area
23 or with planned levels of regeneration.

24 He also noted that proposed plan for 1990
25 to '95 appears to be allowing for more reserves, but

1 there are no restrictions on the size of the cuts.

2 With regard to the Gordon Cosens unit, he
3 has indicated that the cut-overs are extremely large,
4 that, as I just demonstrated to you, the clearcut
5 exercise produced a map showing the last 10-year
6 contiguous cut to be about 20,000 hectares in size,
7 widths of clearcut patches were in excess of three
8 miles in some cases. He indicated at page 203 to 204
9 that regeneration success in some areas is poor.

10 With regard to the English River FMA, he
11 indicated at page 213 that contiguous cut-overs
12 including adjacent licences range from in size from
13 5,000 hectares to 55,000 hectares. The largest
14 clearcut for a year recorded in the clearcut exercise
15 was in this unit and that was 1,342 hectares.

16 He also indicate at page 214 that
17 regeneration is not keeping up to the harvested area or
18 planned regeneration.

19 With regard to the Spruce River FMA at
20 page 252, he indicated that contiguous cut-overs exceed
21 20,000 hectares.

22 If I may digress for a moment, with
23 regard to the size of reserves indicated by the
24 Industry in argument I would like to recall to you his
25 evidence that with regard to the White River FMA 4.7

1 per cent of the 13,214 hectare harvested area was left
2 as reserves. 4.7 per cent.

3 MADAM CHAIR: Would you repeat that, Ms.
4 Swenarchuk, please?

5 MS. SWENARCHUK: 4.7 per cent, this is
6 the White River FMA, of the 13,214 hectare area
7 harvested was left as reserves.

8 In the Spruce River FMA, about 3 per cent
9 of the harvest area was established as reserves for
10 1981 to '86.

11 The next unit I will discuss is the
12 Kapuskasing Crown Management Unit in which he indicates
13 at page 285 that contiguous cut-overs are up to at
14 least 15,000 hectares, retention of moose corridors is
15 evident in new cut-overs.

16 In the Wawa Crown Management Unit, at
17 page 297, he records contiguous cut-overs up to 4,000
18 hectares and, again, more reserves in recent cuts,
19 primarily narrow strips or blocks of non-commercial
20 timber.

21 In the Fort William Crown Management Unit
22 page 300 of the report, he indicates clearcuts up to
23 4,000 hectares.

24 MADAM CHAIR: Excuse me, Ms. Swenarchuk.
25 With respect to the Fort William management unit, do

1 you mean contiguous clearcuts ranging up to 4,000
2 hectares?

3 MS. SWENARCHUK: I will check the
4 original text on that, Madam Chair.

5 Turning to the Temagami management plans
6 of '85 to 1992, this is of course not strictly the
7 boreal forest anymore, he indicated that the cut-overs
8 are variable in size, the largest being about a
9 thousand hectares, that there is no limit on the size
10 of the clearcut areas or indication of the time between
11 shelterwood cuts on the same area.

12 With regard to regeneration, I would like
13 to read his observations at page 349. You will recall,
14 Madam Chair and Mr. Martel, that Exhibit 1604B contains
15 an extensive history and analysis of the management on
16 the Temagami unit. I don't intend to go through it in
17 detail, but he has said this at page 349:

18 "The assumption that has to be made is
19 that the OMNR without regional timber
20 supply models, no records of actual
21 allowable cuts, somehow is orchestrating
22 the orderly disposition of volume
23 commitments based on previous timber
24 supply arrangement and historical cuts
25 that were, in turn, based on accelerated

1 harvest of older timber. The system is
2 not only irracionale, it is also
3 foreboding to the communities that base
4 their long-term survival on that forest."
5 He indicated at page 355 that 37 per cent
6 of the cut area has been regenerated naturally and
7 artificially from 1980 to 1989, and that their
8 assumptions about the rate of white pine regeneration,
9 this is at page 359:

10 "The successful regeneration rate of
11 125 per cent is extremely optimistic for
12 white pine considering that the past
13 success rate for the northeastern region
14 was about 3 per cent."

15 With respect to, again, this issue of
16 cut-over size, he noted at page 362 areas cut are too
17 large for the amount of site variation.

18 Finally with regard to the Latchford unit
19 management plan, he indicated that in the 1990 to 1992
20 interim plan there is no prescribed limit on the size
21 of the clearcut areas. The largest clearcut area
22 observed is about 3,000 hectares, pockets of timber
23 have been left, probably due to rough terrain and,
24 again, he found what he considered to be an overly
25 optimistic sense of regeneration of white pine given

1 the history of the area.

2 Now, Madam Chair, Mr. Martel, that
3 volume, Volume 2 of Exhibit 1604, includes many more
4 details than I have reviewed, but I did want to recall
5 some of the evidence you have received of actual cut
6 sizes current in plans in the 80s.

7 Now, you also have received, of course,
8 the evidence of the clearcut exercise and testimony
9 regarding it in Volume 177.

10 From the perspective of Forests for
11 Tomorrow, both the survey results and the process used
12 in the clearcut exercise are important. We consider
13 that the definition of clearcut and contiguous clearcut
14 developed by the committee included a number of
15 variables that are useful, very useful in considering
16 the issues of clearcut size.

17 If you look at page 24 of this MNR
18 statement of evidence, Panel 10B, you will note that
19 the committee found this distinction with regard to
20 when an area is regenerated, that where the objective
21 is forest production an area is regenerated and is no
22 longer a clearcut, once the regeneration on the area
23 has reached free to grow status, and that's probably
24 one to eight years, but if the objective is wildlife
25 habitat, having six metres of new forest growth, it

1 could be plus or minus 20 years -- up to 20 years.

2 If the issue of concern would be
3 eliminating a potential for erosion, the time period
4 they are are looking at could be about two years.

5 So we think it is important in
6 considering what still constitutes and unregenerated
7 clearcut to think about those different elements that
8 one is attempting to protect; the regeneration
9 question, but also the habitat question, the erosion
10 potential.

11 Now, the committee also considered the
12 issue of contiguous size of cuts and what constitutes a
13 break in a cut and the established criteria for that as
14 well that FFT considers is useful, and at page 38 they
15 indicated that:

16 "A break in the contiguous pattern are
17 areas that remained uncut at the time of
18 the initial harvest which are a size of
19 200 metres by 200 metres or large and
20 are of any shape."

21 Further, at page 38:

22 "Breaks separating blocks of harvested
23 area exist when a portion of the harvest
24 area is separated by a distance that
25 approximates the size of an annual

1 average cut block in that area."

2 They indicate at page 53 that they chose
3 the largest clearcut and a contiguous cut comprised of
4 at least three years of adjacent cuts within the last
5 10 years, then they left it to each party to interpret
6 what constitutes a clearcut.

7 Now, at page 68 of that witness statement
8 is the summary chart which you may recall - it looks
9 like this - of the sizes found.

10 MADAM CHAIR: Did you say that was page
11 58?

12 MS. SWENARCHUK: 56, Madam Chair.

13 The testimony with regard to the cut
14 indicated, for example, that if a single stand is
15 large, larger than a thousand hectares, there is a
16 greater chance of allocating a larger or entire block
17 for cutting. The exercise did not reveal whether there
18 is a trend to larger or smaller discreet clearcut
19 areas.

20 However, I would ask you to look again at
21 that chart on page 68 for the size of the areas that
22 were identified.

23 I want to turn briefly to the evidence of
24 Ms. Patton Lodge Lindsey and the resulting MNR
25 undertaking which is Exhibit 1640A and the

1 corresponding transcript here is Volume 230, page
2 41,933.

3 MADAM CHAIR: Could you repeat that, Ms.
4 Swenarchuk?

5 MS. SWENARCHUK: The MNR undertaking is
6 Exhibit 1640A and the corresponding transcript is
7 Volume 230, page 41,933.

8 Now, Ms. Lodge Lindsey was concerned
9 about the contiguous size of cuts in Havrot Township
10 prompting a response from a local logging operator, Mr.
11 Meakin, and this is at page 41,952. He indicated:

12 "The clearcuts we have talked about
13 are extensive and, yes, in my own mind I
14 even questioned this spring why were the
15 new clearcuts right adjacent to the old
16 block. It was a question that bothered
17 me too as an operator."

18 Now, I would like to summarize for a
19 moment the results established in the MNR undertaking
20 regarding the size of contiguous clearcuts in Havrot
21 Township, and significantly this undertaking was
22 answered applying the criteria of the clearcut
23 exercise.

24 It found that the bulk of the clearcut is
25 in one section, and to make a detailed story short, the

1 contiguous cut-over area is 2,439 hectares of which
2 1,621 hectares is open clearcut. The average annual
3 cut block size for 1985 to 1990 was approximately 500
4 hectares, the 1990 to '95 allocation will result in a
5 2,733 hectare contiguous cut-over.

6 Now, I would like to turn to the evidence
7 of Mr. Tim Grey with regard to Missinabie Park. He
8 filed Exhibit 1963. His testimony begins at page
9 58,176. He showed you a photo of freehold land owned
10 by Spruce Falls in the area and then he indicated later
11 at page 58,187 to -88, an entire stretch of the river,
12 for which he provided details, and I am summarizing,
13 had been completely deforested as far as you could see
14 from the helicopter. Only one node of about 750
15 hectares at one point was left, but that has been
16 scheduled in the current plan to be harvested.

17 He testified that it seems that in the
18 current timber management process there are
19 clearcuts -- that it results in clearcuts that go on
20 for kilometres and kilometres, and then he provided
21 you, as you will recall, with the size of areas to be
22 cut in the 1991 to '96 plan indicating that there are
23 61 areas that are larger than 260 hectares in size.
24 They range in size from 260 hectares to 3,460 hectares
25 all in individual cut blocks.

1 MADAM CHAIR: Could you repeat that
2 please, Ms. Swenarchuk?

3 MS. SWENARCHUK: I'm sorry, Madam Chair.
4 I am referring to his testimony at page 58,195 where he
5 indicated that for the 1991 to '96 plan there are 61
6 areas that are larger than 260 hectares in size,
7 ranging in size from 260 hectares to 3,460 hectares all
8 on individual cut blocks.

9 I am aware, Madam Chair and Mr. Martel,
10 that Mr. Cantin testified to you later as to the
11 reasons for that largest cut. Forests for Tomorrow
12 continues to be concerned, however, about all the other
13 cuts.

14 As he testified, almost 40 per cent of
15 the total harvest area is containing blocks larger than
16 260 hectares.

17 Again, I would remind you that Mr. Gray
18 used both photographs and analyses of the current plans
19 and he told you that he is a qualified forest
20 ecologist, in fact, quite capable of interpreting the
21 data.

22 Now, I want to turn finally on this
23 subject to the MNR evidence of Exhibit 2270 in which
24 the survey was taken of 17 management plans in which a
25 total of 94 clearcut that exceeded 260 hectares were

1 identified. There was a survey of 17 management plans
2 in which a total of 94 clearcuts that exceeded 260
3 hectares were identified.

4 The average size of clearcuts that exceed
5 260 hectares is 581 hectares. The rationale for
6 exceeding the 260 hectares include a number of
7 different rationales; caribou habitat management,
8 residuals expected to remain, irregular shape, budworm
9 damage, low potential for moose habitat, and I want to
10 return to that one, the reserves, good edge to area
11 ratio, overmature stand.

12 Sixty of the 94 cuts over 260 hectares
13 are in the Gordon Cosens FMA. All of the clearcuts
14 exceeding a thousand hectares, 11 in total, are in the
15 Gordon Cosens FMA. Those were rationalized as site
16 overmaturity, budworm damage and, again, the low moose
17 habitat capability.

18 In areas of high to medium capability for
19 moose, 4.5 per cent of the planned cut area, this is
20 generally, not just in the Gordon Cosens, was in
21 clearcuts over 260 hectares. In areas having low
22 capability to support moose, 47 per cent of the planned
23 cut area was in cuts over 260 hectares.

24 Madam Chair, this is, in the view of
25 Forests for Tomorrow, an indication of why we cannot

1 rely on the moose guidelines as any kind of regulatory
2 mechanism regarding the size of cuts. They were not
3 intended for that and the details compiled by the
4 Ministry demonstrate there are limitations for that
5 purpose.

6 There are further issues, however,
7 arising from these indications that were identified in
8 Mr. Lindgren's cross-examination of this evidence
9 beginning at page 66,855 and that is that, first of
10 all, the criteria used in this survey were not as
11 rigorous as those set down in the clearcut exercise.

12 He specified at page 66,856 that if there
13 was a break of at least 120 metres in the same cut-over
14 the two pieces or the same cut-over would be counted as
15 two and not one. In other words, smaller breaks
16 between the cut-overs were taken to indicate separate
17 cuts. Under the clearcut exercise some of these would
18 have been tabulated as one larger cut. So the criteria
19 used were different, not as rigorous.

20 In this exercise there was no assessment
21 of the contiguity of adjoining cuts or of the lead
22 times, presumably the cut times between them.

23 The average size, as I indicated, of the
24 94 cuts exceeding 260 hectares was 586 hectares each.
25 Mr. McNicol maintained that it wasn't fair to use

1 averages, but he wasn't able to indicate the actual
2 size of the clearcuts approved in 1991. He questioned
3 the usefulness of such information. Mr. Martel
4 indicated that to the public such information is
5 useful.

6 Our conclusion with regard to that Tab 2
7 summary in that exhibit is that it conceals more than
8 it displays.

9 Now, the MNR applies the moose guidelines
10 less rigorously in areas with low moose capability.

11 It is the position of Forests for
12 Tomorrow that for the 70 per cent of other species
13 supposedly protected by the application of the moose
14 guidelines it is very problematic that they are applied
15 less rigorously, of course, in areas with low moose
16 capability because there aren't other sufficient
17 protective strategies for those species.

18 MR. FREIDIN: Can you refer to the
19 evidence in support of that proposition, please?

20 MS. SWENARCHUK: What proposition
21 precisely?

22 MR. FREIDIN: The proposition that you
23 just made, that somehow by not following the Moose
24 Habitat Guidelines you are going larger than 260, that
25 that is somehow inconsistent with the provision for the

1 70 per cent of the species that you referred to.

2 Is that your interpretation or is there
3 some evidence that you are relying on?

4 MS. SWENARCHUK: There is certainly
5 evidence with regard to the alleged protective capacity
6 of the moose guidelines with regard to 70 or in some
7 cases, I think there was some evidence, 80 per cent of
8 the species.

9 As I indicated, it is the position of
10 Forests for Tomorrow that the lack of application of
11 the guidelines or the less rigorous application of them
12 in areas of low moose capability causes problems for
13 other species.

14 As I indicated, that's the position of
15 Forests for Tomorrow.

16 MR. FREIDIN: Where is the evidence in
17 support of that proposition?

18 MS. SWENARCHUK: Well, Mr. Freidin, you
19 can have your chance in your reply of two days, if you
20 like.

21 MR. FREIDIN: Do I take it there is no
22 evidence that I can go to the transcript to find that?
23 I want to know what I am responding to.

24 MS. SWENARCHUK: I think if you hear Mr.
25 Lindgren later on issues of biodiversity that will be

1 what you need to respond to.

2 MR. FREIDIN: Thank you.

3 MS. SWENARCHUK: So our conclusion for
4 all of this, Madam Chair and Mr. Martel, is that, first
5 of all, it is unfortunate that in preparing this reply
6 evidence the MNR did not use the same criteria as they
7 used in the clearcut exercise. It would have produced
8 data more comparable for you and in our view it would
9 have provided a better assessment, as well as a more
10 consistent one of the boundaries between cuts.

11 Nevertheless, it is the position of
12 Forests for Tomorrow, and I have reviewed some of the
13 clearcut size evidence you have received, that there is
14 clearly considerable evidence including from the
15 Ministry's survey of currently planned cut sizes that
16 cuts continue to be large and from this evidence that
17 contiguous cuts continue to be large.

18 Finally, I would just like to recall to
19 your attention that members of the public have
20 expressed concerns to you in the satellite hearings
21 with regard to the size of cuts and some of those we
22 have collected for you in our appendix.

23 I would like to turn now, Madam Chair and
24 Mr. Martel, to some of the arguments we have prepared
25 with regard to effects of timber management beginning

1 at page 156 in our argument and following through.

2 On those pages and the following pages we
3 have described and collected examples from the evidence
4 of the kinds of environmental effects of timber
5 management that concern Forests for Tomorrow and the
6 sources in the evidence where those effects have been
7 described.

8 There is a long list and I don't intend
9 to spent a great deal of time on it, unless you wish
10 otherwise, but I would like to read through some parts
11 of it.

12 First, we list on page 151 species
13 conversion and the position that the practice of large
14 area clearcutting in the boreal forest has led to an
15 increase in the hardwood component of the forest and to
16 the conversion of previously conifer stands to
17 mixedwood stands over large areas of the boreal forest.
18 We have cited sources in support of that.

19 Then we talk about the effects, the
20 hydrological effects and I think you have received
21 actually considerable evidence about this.

22 Harvesting operations can have
23 detrimental effects on water quality. We have
24 summarized some of those in paragraph 324.

25 Clearcutting can increase peak stream

1 flow and reduce minimum flow during the dry season,
2 leach nutrients and elements from the soil and deposit
3 them in the streams, cause acid run-off, enhance
4 erosion and siltation of streams, degrade water quality
5 if no buffers are included around waterbodies, and we
6 have provided the source for that.

7 This section with regard to hydrological
8 effects also discusses the impact of herbicide
9 application at paragraph 320, 321, Mr. Marek's evidence
10 with regard to the effects of hydrological change in
11 the Clay Belt area; paragraph 322, the rise and fall of
12 the water table associated with large area clearcutting
13 causes a space in the strata of the soil. Those are
14 some of the hydrological concerns.

15 MR. MARTEL: You have put your finger
16 right on the question that I was about to ask you.

17 Are you suggesting that those are actual
18 effects or that they are potential?

19 I want to distinguish between what in
20 fact is occurring out there, in fact these are
21 occurring or are they being mitigated. I think it is
22 important to distinguish that.

23 MS. SWENARCHUK: With regard to such
24 effects as the changes in the Clay Belt water table, I
25 think Mr. Marek demonstrate to you that it is actually

1 happening and these air spaces are happening.

2 It is the evidence as well of Mr. Benson
3 in his witness statement that the other hydrological
4 effects are actually happening and that they are not
5 mitigated by the small areas that are being left in
6 reserves.

7 He indicates in his witness statement
8 that there are more reserves being left now or were at
9 the time he did that study in 1989/90 that had been
10 left previously, but that they were too small given the
11 area of the cuts, in his opinion, to mitigate such
12 problems as the hydrological effects.

13 There is a clear difference in the
14 position of the Ministry and the Industry vis-a-vis
15 Forests for Tomorrow on these questions.

16 At page 160 we demonstrate a concern and
17 what we consider to be an actual effect; that is
18 rutting and ponding on forest lands.

19 In paragraph D, destruction of the forest
20 floor; paragraph E, improper impacts of site
21 preparation techniques. Scarification, particularly
22 with heavy scarification equipment, that is in common
23 use in Ontario can have a devastating effect on the
24 site. One effect can be the removal of the soil and/or
25 topsoil.

1 In paragraph F we have talked about -
2 damage to shallow, fragile and sensitive sites.

3 What I would say with regard to the
4 actual and potential question here, Madam Chair and Mr.
5 Martel, is, it is the position of FFT that our evidence
6 has demonstrated that there is actual damage occurring
7 to shallow, fragile and sensitive sites.

8 The slides demonstrate that, Mr. Marek
9 and Mr. Benson's testimony to that also exists, but
10 that with regard to the potential effects of that on
11 the productivity of the site, as we have said in this
12 paragraph, it is known that harvesting and
13 silvicultural operations can have harmful effects on
14 the site, that the magnitude of this effect is not well
15 documented for Ontario. Quantitative estimates of the
16 degradation have been made in British Columbia.

17 The position of Forests for Tomorrow with
18 such question as this is: We unfortunately have a real
19 lack of data and documentation and a quantification of
20 these effects in Ontario. In this regard we are
21 talking about a potential effect.

22 We know, however, from the evidence, we
23 submit to you, we know that such damage is occurring
24 and that the proper response to prevent possible
25 productivity loss is a more protective approach to the

1 practice to prevent this damage from happening. That's
2 the application of the precautionary principle, in our
3 submission.

4 In paragraph G on page 162 we have
5 provided you with sources for the concern regarding
6 loss of productive forest land to roads, landings,
7 delimbing and slashing sites; and then in paragraph H,
8 concerns with regard to erosion.

9 On page 163, which is misplaced, where
10 164 should have been, we talk about the potential
11 nutrient - this is potential - nutrient depletion on
12 full-tree logged sites which I will discuss in some
13 detail later. Also, acidification of sites and I might
14 add that's considered to be a potential effect of
15 full-tree logging as well.

16 In paragraph K we have identified, and
17 this is again a fundamental difference in position from
18 the Ministry and the Industry, Forests for Tomorrow
19 considers that we have in Ontario a lack of integration
20 of logging and silviculture and failure to practice
21 site specific forestry, as well as, of course, little
22 use of modified cutting.

23 The concern with regard to the lack of
24 integration is that large areas are being treated
25 uniformly with large area cutting regardless of the

1 site types within them and without sufficient attention
2 to the specific requirements of the type of sites.

3 As we have said in paragraph 343,
4 management of Ontario's forest is not site specific.
5 If harvesting and silviculture were conducted to
6 consider similar site conditions, as claimed by the
7 Ministry in the class environmental assessment
8 document, more variety in the type and size of cuts
9 would be expected to occur in the province. Variation
10 may occur within very small areas as indicated in the
11 forest ecosystem classifications, which indicate that
12 there may be large vegetational changes within areas of
13 only 10 hectares. Silvicultural and harvesting
14 operations typically cover areas much larger than 10
15 hectares.

16 In paragraph L we have listed some of the
17 sources of information regarding wasteful practices; in
18 paragraph M, a reference to some of the sources having
19 to do with socio-economic effects; in paragraph N,
20 impacts on biodiversity which Mr. Lindgren will be
21 discussing further.

22 We have summarized here that:

23 "The long-term provision of an equal
24 distribution of age classes,
25 heterogeneity of forest types, and

1 different species composition to ensure
2 that the diversity required by all life-
3 forms is not being provided for."

4 In paragraph O we have listed a number of
5 non-timber values negatively affected by timber
6 management.

7 Madam Chair and Mr. Martel, you have
8 heard volumes of evidence on that issue from many
9 different witnesses and parties.

10 In paragraph P we have recalled to you
11 the garbage left on forest lands; paragraph Q, the
12 concern for large cuts and its effect:

13 "Clearcuts are much too large for site
14 protection or to ensure that species
15 diversity of all life-form will be
16 maintained."

17 Paragraph R, clearcuts to lakes, creeks
18 and highways; and paragraph S, issues of use and misuse
19 of pesticides.

20 Madam Chair, this might be an appropriate
21 time for a break before I discuss full-tree logging, if
22 that's acceptable.

23 MADAM CHAIR: That's fine. We will be
24 back in 20 minutes.

25 ---Recess at 10:30 a.m.

1 ---On resuming at 10:50 a.m.

2 MADAM CHAIR: Go ahead, Ms. Swenarchuk.

3 MS. SWENARCHUK: Thank you, Madam Chair.

4 I want to turn now to Forests for
5 Tomorrow's concerns with regard to potential impacts of
6 full-tree logging, particularly potential for nutrient
7 depletion on sites and the potential for acidification.

8 Now, we have written on this subject in
9 pages 169 to 185 of our written argument and
10 specifically we included details of what we consider to
11 be each of the studies of importance on this subject.
12 I don't propose to review them here. These include
13 studies carried out or compiled by MNR scientists and
14 technical people and others reported in the scientific
15 literature.

16 We have also included a paper by Carlisle
17 and Methven. I am aware of the Industry's comments
18 that this paper refers to biomass removal for energy
19 productivity and energy production. We suggest that a
20 full reading of the article indicates that the authors
21 considered the issue on a broader basis than that and
22 we included some relevance sections of the article at
23 page 182 of our written argument. I want to take a
24 moment to review that paragraph. They wrote:

25 "If we demonstrate that there is a

1 nutrient deficit under a particular
2 harvesting system, we must ask ourselves
3 what this deficit really means in terms
4 of site productivity. We cannot yet
5 assess how large a deficit has to be to
6 cause current, or what the time scale of
7 effects could be..."

8 I interject that this paper was written
9 in 1979 and I think there is considerable literature
10 since.

11 "However..." the authors went on to say,
12 "..when they do limit tree growth the
13 problems may be very difficult to solve.
14 It may also be misleading to assume that
15 because harvesting leaves and small twigs
16 only removes a small proportion of the
17 total nutrient capital in the system, it
18 is of no importance. As Kimmins and and
19 Krumlik (1976) point out, 'A small
20 capital of rapidly circulating nutrients
21 may sustain a greater productivity than a
22 large capital with slowly circulating
23 nutrients." To remove such key
24 components as leaves and twigs with
25 their readily available nutrients,

1 (except in certain acid conditions where
2 proteins are immobilized by polyphenols),
3 could have great effects on productivity
4 even though the quantities involved are
5 small.

6 "Until we know more we should rely on
7 the basic principle of good resource
8 management (so often ignored) that if
9 more is taken out of the system than is
10 return, this is bad stewardship. Any
11 nutrient deficit should be regarded as a
12 management as failure, quite regardless
13 of magnitude."

14 Now, Forests for Tomorrow also disagrees
15 with any suggestion made, and I am not sure to what
16 extent this correlation is being made, but Mr. Armson
17 in the context of nutrient depletion talked about
18 agricultural lands having been reforested in southern
19 Ontario, and we refer you at page 172 to what Dr.
20 Hutchinson had to say about that, about those lands.
21 We also indicate:

22 "In addition to the obvious differences
23 in climate, geography, species, site
24 history and treatment of agriculture
25 lands in southern Ontario versus

1 treatment of harvested forestry lands
2 in the boreal region, the lack of
3 scientific justification for making any
4 comparison between the two areas was the
5 subject of comments by Dr. Tom
6 Hutchinson."

7 Commenting on the lack of any documented
8 information of the site site history of the agriculture
9 lands in question, he testified:

10 "What it demonstrated was that you
11 can't continue to grow high nutrient
12 demanding agriculture crops on nutrient
13 poor sand and part of the problem was
14 blowing and part of it presumably was a
15 nutrient thing and there is no actual
16 assessments done at the time."

17 It is the position of Forests for
18 Tomorrow that no scientific basis exists to suggest
19 that the two processes, one in the boreal forested
20 regime and the other in the southern Ontario
21 agricultural region, are in any way comparable, nor has
22 MNR produced any evidence in support of this example to
23 prove comparability.

24 Now, as I said, we summarized and
25 excerpted the relevance scientific literature on the

-1 subject of full-tree harvest effects and it is our
2 submission that the weight of the evidence clearly
3 shows that scientists and foresters demonstrate concern
4 regarding the potential of full-tree harvest for
5 acidification and site nutrient depletion.

6 That includes scientists working for or
7 relied upon by the Ministry, Mr. Gordon, Mr. Wiensczyk
8 and Timmer, Marek and Savinski whose study was funded
9 by the Ministry. Also, Mr. Ian Morrison whose studies
10 have been cited by the Ministry who produced a paper
11 that we have included at page 180 called Full-Tree
12 Harvesting Disadvantages from the Forester's Viewpoint,
13 and that's Exhibit 1425.

14 It is the submission of Forests for
15 Tomorrow that this is a proper issue for the
16 application of the precautionary principle, that the
17 wording of that principle in Direction 90's, which I
18 quoted yesterday, in our view applies directly to this
19 issue and I am going to reread it.

20 "Our understanding of the way the
21 natural world works and how our actions
22 affect it is often incomplete. This
23 means we exercise caution and special
24 concern for natural values in the face of
25 such uncertainty and respect the

1 precautionary principle."

2 It is our submission that with regard to
3 potential effects of full-tree harvest the state of our
4 information is incomplete, it is going to be incomplete
5 for a long time, but that the weight of concern
6 expressed in the literature indicates that the steps to
7 prevent that harm should be done.

8 Now, reference has been made to Mr.
9 Marek's testimony that some shallow sites may be very
10 protective. That does not change -- sorry, some
11 shallow sites may be very productive.

12 That does not change the position of FFT
13 that protected measures for shallow sites should be
14 utilized, and I think Mr. Marek was clearly an advocate
15 of that, that some of those sites may be very
16 productive does not remove the concern for the
17 fragility and sensitivity of many of these sites.

18 Now, for all of these reasons, Forests
19 for Tomorrow has proposed protective measures on these
20 sites with regard to full-tree logging in condition 30
21 and we respectfully urge you to include it as a
22 condition of any approval of the undertaking.

23 I am going to turn now to evidence of
24 actual effects disclosed in monitoring reports that are
25 evidenced before the Board and those are in Volume 2 of

1 our written argument at pages 374 to 383. These,
2 again, are very current reports.

3 I don't propose to go through them.
4 There are 60 infraction reports in total. I merely
5 want to draw your attention to them.

6 They include harvest in a provincial
7 park, an area of concern, in a wildlife travel
8 corridor, harvest of seed trees, harvest on road
9 right-of-ways, harvested reserves, unauthorized harvest
10 within an FMA, harvest outside of an approved cut
11 block, harvested trees less than the prescribed
12 diameter, also references to infractions related to
13 wasteful practices, unauthorized garbage dumps,
14 unauthorized or improper activities such as
15 unauthorized road or skid trail construction,
16 unauthorized water crossings, damage to regeneration,
17 harvest equipment moved through a creek, et cetera.

18 As I say, 60 infraction reports in total
19 which we ask you to examine. Mr. Lindgren reminds me
20 that many of the instances are in fact summaries and
21 more than one infraction report is included in the
22 instances. So there is more than 60 total.

23 I would like to turn now to that broad
24 subject of environmental effects that can be
25 characterized as wood supply and sustainability issues.

1 We have written on this topic beginning
2 at page 205 of Volume 2 -- excuse me, we have written
3 beginning at page 185 of Volume 1.

4 I will start with our conclusion, though,
5 which we have cited at page 205 and that is that:

6 "It is the position of Forests for
7 Tomorrow that the Environmental
8 Assessment Act and the Crown Timber Act
9 requires sustainable levels of wood
10 supply and protection (sustainability) of
11 all other resources of the forest. Even
12 with respect to the one forest resource,
13 timber, which the MNR purports to manage,
14 it does not comply with the requirement
15 of sustainability."

16 Secondly, in paragraph 477:

17 "A change to harvesting only at the
18 maximum sustainable level is necessary to
19 achieve long-term sustainability of the
20 resource, and stability for northern
21 communities."

22 Now, on pages 185, -6 and -7 we discuss
23 the issue of wood supply and sustainability and we
24 submit that the Ministry's approach to sustained yield
25 does not comply with the requirements of the Crown

1 Timber Act in that, in paragraph 415:

2 "The MNR 'practical' definition..."

3 which we have quoted above,

4 "...does not require the 'continuous
5 approximate balance of growth of timber
6 and timber cut' required by law, nor does
7 the totality of evidence submitted to the
8 hearing indicate that the timber
9 management and renewal program is meeting
10 that requirement."

11 Further, I am reading at page 187, it is
12 the position of Forests for Tomorrow that:

13 "There is no justification in law..."

14 this is paragraph 416,

15 "...for the Ministry's decision to
16 interpret sustained yield without its
17 most essential element."

18 Further, paragraph 420, that:

19 "The concern for long-term sustained
20 yield and sustainability of the forest is
21 at the heart of public concern regarding
22 forest harvest and renewal practices."

23 You will recall again that the Minister's
24 statement in Direction 90's which we looked at
25 yesterday indicates that sustainability of resources

1 and sustainable development is now the direction of the
2 Ministry.

3 Forests for Tomorrow supports that
4 direction.

5 It is our view, which we have recorded at
6 paragraph 422, that:

7 "To achieve actual sustained yield it
8 is necessary to recognize the practical
9 limitations of the capability of a forest
10 to produce a certain amount of wood. The
11 sustainable yield for a forest can be
12 expressed..." as in that paragraph, the
13 long-term sustainable yield.

14 So the long-term sustainable yield that
15 Forests for Tomorrow supports, in our submission, is
16 consistent with the biological capability of the forest
17 and with law, the requirements of the Crown Timber Act.

18 Now, in this section we discuss problems
19 related to the use of OWOSFOP and the MAD calculations
20 such as volume fluctuations, the rotation ages used,
21 the inclusion of reserves in the land base and we
22 recall again the evidence of Mr. Benson based on his
23 analyses of wood supply in the units in Exhibit 1604B,
24 analyses that demonstrate a decline in the levels of
25 the spruce working group and we have written about that

1 at pages 189 and 190.

2 Further, at paragraph 431, we have
3 indicated:

4 "Complicating the problem of
5 determining the allowable cut by any
6 method, are the estimates of volume
7 available. Although Table 4.17 of the
8 Timber Management Plan indicates volumes
9 that are to be harvested, it is actually
10 only an estimate. Neither the FRI nor
11 the operational cruising can be related
12 to the actual scale of volumes. The
13 necessity for linking the area and volume
14 harvested has been emphasized by Dr.
15 Baskerville.

16 "Without an accurate assessment of the
17 scaled volumes that may be expected from
18 the operational areas of a management
19 unit, no reliable estimates of wood
20 supply may be made at the operational
21 level of management planning. Thus, the
22 wood supply available to the industry
23 from a management unit is not
24 predictable."

25 ~MR. MARTEL: I have a concern. I am not

1 sure, can anyone predict the volume out there with a
2 real degree of accuracy?

3 We have heard Dr. Osborn saying, the only
4 way to figure it out is to cut it down and you know how
5 much volume you had, and I can't recall seeing anything
6 which is saying that you can go out and actually
7 calculate specifically what is there.

8 We have some guesstimates, we can do it
9 by area, we can do it by volume, but to get as
10 specific, as I think you are saying, maybe you can
11 explain or run it by me again the material you have or
12 point it out to me where I can read it that we have the
13 capacity to be as precise as you would indicate.

14 MS. SWENARCHUK: The evidence that I can
15 recall that might assist you, the only evidence I can
16 recall at the moment, Mr. Martel, is the report of Dr.
17 Baskerville and his recommendation that the volume of
18 area be better calculated and my recall of that report,
19 which I admit I have not read for some time, certainly
20 in my understanding was premised on the basis that
21 better estimates were possible.

22 MR. MARTEL: I can't recall him telling
23 us, though, in his evidence, and it might have escaped
24 me, but I can't recall him telling me how precisely
25 that would be done. I felt at the end that it was

1 still kind of a guessing game. I could be wrong, but I
2 thought that's what just everybody has said to us.

3 MS. SWENARCHUK: I don't think we have
4 anything to add to what Dr. Baskerville told you, Mr.
5 Martel.

6 I would like to turn now to the next
7 section of our written argument which has to do with a
8 provincial wood supply overview, and that's at pages
9 191 to page 205.

10 It is the position of Forests for
11 Tomorrow that there is considerable uncertainty
12 regarding the short- and long-term wood supply in
13 Ontario, despite the importance of this question for
14 the stability of northern communities, that there is
15 considerable difficulties with the data available.

16 We have reviewed in paragraphs 437 to 440
17 some of the sources of this uncertainty. We go on to
18 note that non-MNR studies have concluded that conifers
19 are being depleted at a non-sustainable rate, and this
20 is in paragraph 441, the reference to Honer and
21 Bickerstaff and at page 443 more details.

22 So Forests for Tomorrow has a concern
23 that there is an overall overdepletion going on at the
24 provincial level.

25 Now, that concern is deepened by the

1. survey results from Mr. Benson's study in which he
2 examined the wood supply projections in the plans for
3 all those units and we have listed the units for you on
4 page 193 to -94 and on page 194 listed our concerns.

5 "The majority of management plans
6 examined have allowable cuts for Working
7 Groups that are too high to sustain in
8 the future, because (a) the amount of
9 timber volume being designated as an
10 allowable cut in the present plans is not
11 sustainable in the future..." and four
12 reasons are cited in support of that view.

13 Secondly, on paragraph B on page 195:

14 "The majority of the working groups
15 that have volume predictions made
16 indicate that declining volumes are to be
17 expected. The management units examined
18 were selected on the basis of trying to
19 cover representative areas of the
20 province and the accessibility to the
21 units. If the sample of management unit
22 is considered to be random, possible
23 shortages of timber are indicated in the
24 future for management units, the regions
25 and Northern ontario. As there is a

1 surplus of allowable cut area in any
2 management units, it may not be too late
3 to address this problem if realistic
4 allowable cuts are determined based on
5 the productive capability of the land for
6 sustained yield."

7 We remind you then in the next paragraph
8 of the particularly detailed history that was recorded
9 with regard to wood supply issues in the Temagami area.

10 We then discuss on pages 197 and 198 the
11 MNR position on these questions reflected in their
12 response to the Board's interrogatories.

13 I would like to review this in some
14 detail. Paragraph 455, we have recalled that:

15 "In its response to Board Interrogatory
16 No. 52, MNR indicated that at present the
17 'sustainable harvests' for each forest
18 management unit by working group/forest
19 unit is found in timber management plans,
20 and is recalculated every five years."

21 Then later in the same reply:

22 "The current 'sustainable harvest
23 level' is set for the province in the
24 Forest Production Policy."

25 Now, first, it is the position of Forests

1 for Tomorrow, reflected in paragraph 456 that:

2 "Given the declining wood supply
3 evident in the management units studied
4 by Professor Benson, they cannot be
5 described as 'sustainable' or even as
6 'sustained yield' in any normal usage of
7 the terms. MNR's attempted emasculation
8 of the sustainability concept, evident in
9 its position above, offends the Crown
10 Timber Act and the Ministry's commitment
11 to sustainable development.

12 Furthermore..." to our knowledge,
13 "...since there is no connection between
14 the MAD calculations for each unit and
15 the province-wide volume requirement of
16 the Forest Production Policy, the MNR
17 apparently has two different and
18 disconnected concepts of sustainability
19 functioning at once. The FPP was not
20 based on the calculated and aggregated
21 capability much each unit."

22 Nor, we say, in paragraph 458:

23 "There is no evidence that the FPP was
24 set with any concept of sustainability in
25 mind."

1 It is the position of Forests for
2 Tomorrow that only a provincial policy based on the
3 actual biological capacity of the provincial forest
4 could arrive at a sustainable harvest level.

5 We state further on this subject in
6 paragraph 466 on page 200 that:

7 "It is the position of FFT that to
8 sustain productivity requires recognition
9 of the limit of the biological capability
10 of the forest to produce timber, and the
11 use of a volume and area method of
12 determining the allowable cut."

13 We go on to advocate, as we do in our
14 terms and conditions, the use of the long-term
15 sustainable yield and harvest only at the maximum
16 sustainable level.

17 Now, questions have been raised with
18 regard to whether Mr. Benson's model for long-term
19 sustainable yield and maximum sustainable harvest is
20 usable.

21 It is our view that it is, but the
22 further position that we take on page 202, paragraph
23 472, is that:

24 "...Professor Benson's model is a
25 credible one, but that more important

1 than any particular model used to
2 calculate LTSY or the practical level of
3 maximum sustainable yield is the need to
4 recognize the problem of continuing to
5 plan in accordance with OWOSFOP and MAD
6 and without sustainability as a basis.
7 We would anticipate that if the
8 commitment to sustainability of harvest
9 is made..." and I would add if it is
10 ordered by the Board,
11 "...experience with the concept would
12 result in improved models."
13 Now, it has also been suggested that a
14 local wood supply shortage, for example, in a
15 particular unit can be compensated for by, for example,
16 the import of wood from adjoining units.
17 We have addressed that in paragraph 473
18 indicating that:
19 "Although a shortage in a particular
20 management unit may be remedied in the
21 short term by strategies such as seeking
22 wood for a mill in other units, the
23 cumulative effect of such practices will
24 be an accumulating and more wide
25 spread wood shortage."

1 We then go on to recall for you the
2 recommendation of the Forest Sectoral Task Force of the
3 Round Table on Environment and Economy. The
4 recommendation being reproduced in the past paragraph
5 on page 203 and this of course was endorsed by Mr.
6 Boswell from E.B. Eddy, Mr. Vrooman from C.P. Forests
7 Products, Mr. Quinney, Dr. Balsillie from the Ministry,
8 myself, but in a personal capacity, I must explain
9 that, Dr. Balsillie, though, from the Ministry.

10 There was a grappling with the question
11 of employment effects and sustainability, the
12 recognition that they are linked and this final
13 recommendation, which I suggest is consistent with the
14 Minister's words in Direction 90's that we need to look
15 for better and long-term job creation relates to
16 forestry.

17 It is the position of Forests for
18 Tomorrow that that kind of job stability can only be
19 achieved in the long-term by harvesting at a maximum
20 sustainable level. I knew we would be discuss this
21 one, Mr. Martel.

22 MR. MARTEL: Would that include,
23 though -- I mean, the difficulty I have in grasping
24 some of these things is, if we look at trying to
25 regenerate and get the best bang for our buck, your own

1 witness Mr. Marek suggested we might do intensive
2 management somewhere.

3 On the other hand, you are taking the
4 position that we should rely more on natural
5 regeneration and less on artificial regeneration, but
6 it seems to me to be at variance that, on one hand, I
7 think the evidence is that artificial regeneration
8 gives you a greater wood supply, more fiber; on the
9 other hand, you are taking the position that you
10 shouldn't rely on it as much and it seems to me if you
11 want the best wood supply you do a mix and try to get
12 the maximum which is contrary to the position you are
13 taking, it would appear to me.

14 Mr. Lindgren shakes his head, but I think
15 Forests for Tomorrow is on record of wanting more
16 natural regeneration and less artificial.

17 MS. SWENARCHUK: That's correct, Mr.
18 Martel. We are looking for a change in emphasis and
19 these are exactly the subjects that I am going to be
20 discussing in the next half to an hour.

21 We have not said, however, that there
22 would be no artificial regeneration, but more use of
23 enhanced deliberate treated natural regeneration as
24 opposed to the large amount of untreated regeneration
25 which now occurs, which I will be detailing for you in

1 a moment.

2 With regard to maximum sustainable
3 harvest, however, I think the fundamental concern is
4 that we balance harvest and regeneration and not be
5 depleting faster than we can, regenerate whatever the
6 best means may be to do that.

7 You anticipated my next area of
8 submissions and that is the important question of what
9 regeneration results as opposed to treatment data,
10 results, has the Board been given in this case.

11 I want to begin by recalling something
12 that will occur as I go through the evidence and that
13 is, that the term 'areas regenerated' I think has been
14 used in a number of different ways in the case and I
15 think it is important to distinguish between areas that
16 have been treated for regeneration, which have
17 sometimes been referred to as areas regenerated
18 regardless of whether we have results from those areas.

19 So that's one use of the term; areas
20 regenerated meaning areas that have been treated for
21 regeneration.

22 It has even been use I think in this
23 sense, areas regenerating by natural means which, it
24 seems to me, at times translates into areas that we
25 - assume are regenerating by natural means, not areas for

1 which we have results to demonstrate that they are
2 regenerated through natural means. So I just want to
3 make those distinctions clear before we look at the
4 evidence.

5 Now, at the bottom of page 205 in Volume
6 2 we begin our discussion of MNR regeneration evidence.
7 We then go on to discuss OFIA regeneration evidence as
8 well. We demonstrate the concern that the MNR did not
9 provide the Board with actual numbers on regeneration
10 results from the FMA era.

11 There are, I agree, some free to grow
12 results in the FMA reviews, but, for example, when
13 Forests for Tomorrow asked the Ministry in an
14 interrogatory in Panel 15 for certain regeneration
15 results, the only results that came back had to do with
16 Crown Management Units and there were no results
17 available from forest management agreement areas.

18 Now, with respect to the results that
19 were disclosed in the response to that interrogatory,
20 we provided the details in the written argument, but to
21 make it all short, the naturally regenerating lands did
22 better than the artificially regenerating lands
23 reported, and that's on page 207.

24 Now, the MNR witnesses on that panel
25 indicated, this is also documented more fully within

1 the section, I am summarizing now the written argument,
2 the MNR witness said that artificial regeneration could
3 not be compared to natural regeneration because site
4 types treated in the two ways differed.

5 Now, to Forests for Tomorrow this implies
6 that natural regeneration or areas left to nature are
7 areas that are always planned for natural regeneration,
8 but that is not so, as the evidence disclosed, and that
9 can result, for example, because of the lack of funds
10 for artificial regeneration.

11 There was also discussion with the
12 witnesses regarding prime site management and the fact
13 that productivity is an element of prime site
14 considerations and that planting is the preferred
15 option on prime sites.

16 Now, Forests for Tomorrow interprets that
17 as an indication that lower productivity sites are
18 often being left for natural regeneration which makes
19 it even more surprising when they do better.

20 Then on page 209, at paragraph 493, we
21 refer to the testimony of Mr. Waito who conceded that
22 it is strange that the Pineland FMA, you will remember
23 that, I believe it is Exhibit 513. It was proposed I
24 think as representative wording of FMAs for its time.

25 "...it is strange that the Pineland

1 FMA has the same stocking standards
2 for all sites and types of regeneration,
3 since one would expect higher standards
4 to apply to artificially regenerating
5 stands, but the position of the Panel is
6 that 'maximum investment...planting...
7 (does not necessarily)' lead to better
8 stocking results."

9 Now, this we found truly mystifying since
10 the forest product policy assumed double the volume on
11 artificial sites and the conventional wisdom, I
12 suggest, that has been presented here is that one
13 expects better results from planting, and we would hope
14 that to be the case since it is so expensive.

15 Now, with respect to those requirements
16 of the forest production policy, Mr. Greenwood
17 testified that the volume estimates would need to be
18 revisited. It was a crude estimate. That's recorded
19 in our paragraph 496.

20 This appeared to us to contradict the
21 Industry Panel 8, that's the renewal panel, in which
22 the witnesses emphasized that the forest production
23 policy play a crucial role in securing funding for
24 artificial regeneration, presumably because it was
25 intended to lead to better volume results.

1 In total, the evidence of this panel and
2 the lack of clear and comprehensive data regarding the
3 current state of regeneration in Ontario from the
4 government regulator and dispenser of funds is, in the
5 view of Forests for Tomorrow, very unfortunate.

6 The result, however, is that the Ministry
7 has not provided you with comprehensive data with
8 regard to regeneration results in Ontario, nor, of
9 course, have they provided you with comparative data
10 regarding success rates for artificial and natural
11 regeneration or any breakdown of the techniques of the
12 two.

13 Nevertheless, the conventional wisdom
14 continues to be that one gets better regeneration
15 results from artificially regenerated stands.

16 So in the section beginning on page 213
17 we have reviewed the evidence available to the Board
18 regarding long-term plantation management and results
19 of artificially regenerated stands. I will come in a
20 moment to the OFIA evidence based on five-year stocking
21 results, but this is our attempt to summarize for you
22 the amount of evidence that you have, which isn't very
23 much, regarding long-term plantation management results
24 in Ontario.

25 To our knowledge, the only long-term

1 results before the Board are those of the SOARS reports
2 survey of artificially regenerated areas, 1 and 2. We
3 summarize that in some detail in the written argument.
4 Our conclusion is that what they demonstrate are bismal
5 failures in terms of regeneration results.

6 As Mr. Armson said I believe with regard
7 to the SOARS 1 results, they came back profusely to
8 other species, species, these are my words, other than
9 the ones the public paid to plant.

10 Now, as Ms. Cronk indicated in her
11 submissions, the last paragraph of the report mentioned
12 that these were pre-1980 plantations and that practices
13 have improved.

14 Forests for Tomorrow submits that that is
15 an attempt to put the best face on what amounts to a
16 complete failure and waste of public funds.
17 Unfortunately, as I say, to our knowledge there is no
18 other evidence of long-term plantations to compare to
19 test and see whether in fact the results are better,
20 with the exception of Mr. Marek's which I will come to
21 in a moment.

22 May I just emphasize that we are
23 concerned with long-term plantation results because of
24 the testimony of, for example, Mr. Marek and Dr.
25 Hutchinson, and I think this is in fact self-evident,

1 that what plantation looks like at the point at which
2 five-year stocking results are measured can't be any
3 assurance that at rotation age that's going to be a
4 very successful plantation.

5 Certainly, in our submission, it can't
6 provide you with any assurance that those plantations
7 will in any way meet the yield requirements that have
8 been claimed for them.

9 So I think we only have two things to
10 look at in terms of long-term plantations; one is SOARS
11 and the other is Mr. Marek's plantations. We have
12 looked at his testimony with regard to them at pages
13 221 and following.

14 Beginning at paragraph 537, you will
15 recall that Mr. Marek has managed plantations of about
16 75,000 acres for the past 30 to 40 years. Page 221,
17 Madam Chair, paragraph 537 and following.

18 During that time he has been forced to
19 change his view of the potentiation for plantation
20 productivity.

21 Unlike the evidence we have seen from the
22 MNR and the OFIA, which have not indicated specific
23 objectives for growth and yield in their plantations,
24 Mr. Marek specifically sought to obtain 50 cords per
25 acre on 50 year rotations.

1 "He now concludes that he will not
2 double or triple natural yields, but will
3 be lucky to obtain yields equal to
4 Plonski's yield tables for natural
5 stands. He calculates a loss of one and
6 one half metre of mean annual growing in
7 four or five years in his black spruce
8 plantation due to budworm alone."

9 He concludes that the plantations may be
10 a complete loss.

11 On page 222 we have more of his testimony
12 with regard to plantation management in the north,
13 that:

14 "...foresters was idealistic in
15 thinking we could quadruple yields in
16 some areas; the boreal forest is not
17 suitable for this.

18 "The experience of European foresters
19 is that the greatest risk occurs not at
20 the beginning, but when the plantations
21 are pole size.

22 "Many of our plantations do not have
23 good planting for proper development of
24 root systems, contributing to the
25 possibility of later losses.

1 "It is misleading to judge the future
2 returns of a plantation at 4 years or
3 even 10 or 15 years, because we are not
4 aware of what events may follow."

5 He referred in his testimony to the later
6 events of losses through snowfall, budworm, pests.

7 Dr. Hutchinson thought that the time of
8 occurrence of crown closure at about 15 or 20 years
9 would be a more reasonable basis for judging the future
10 of the plantation.

11 We conclude in paragraph 545 that:

12 "The only evidence of long-term results
13 of plantations that the Board has
14 received has been from the SOARS
15 reports and from George Marek. Neither
16 is optimistic and either supports the
17 MNR/industry claims regarding plantation
18 yield potential."

19 We then turn to a consideration of what
20 we have characterized as the tenuous and
21 unsubstantiated argument of the superiority of
22 artificial regeneration.

23 Beginning with the evidence that the
24 preferred option on richer sites is usually to plant,
25 we therefore can may assume that in many cases poorer

1 sites are being left to natural regeneration.

2 "It is therefore not surprising if they
3 do not do as well (as in the OFIA
4 results, p. 124... Table 3..." I will be
5 coming to that later,

6 "... and it is surprising when they do
7 better."

8 We go on to state, and I will summarize
9 now that the evidence indicates that MNR does not
10 collect the necessary data to track the rates of
11 regeneration results on FMAs from natural and
12 artificial means, although the provincial auditor
13 considered that among critical pieces of information.
14 That's at paragraph 550.

15 Witnesses conceded that maximum
16 investment, planting, does not necessarily lead to
17 better stocking results. Rather, said Mr. Waito and
18 others, without artificial regeneration we won't get
19 conifer back on some sites.

20 I want to refer you to paragraph 552 for
21 FFT's position on this evidence which is that:

22 "Given that these are fire originated
23 stands, this position effectively
24 contradicts the MNR's overall position
25 that the effect of clearcutting simulates

1 the effects of fire. If clearcutting
2 emulates fire, conifer stands should
3 regenerate naturally and without
4 increased hardwood after harvest.
5 Artificial regeneration should not be
6 necessary at all. Furthermore, the
7 public is entitled to ask why it is that
8 the expense of artificial regeneration is
9 required merely to get conifer on a site
10 that had it before harvest and not to
11 produce a stand of higher yield..."

12 Further:

13 "This position provides support for the
14 FFT proposition that current harvest
15 practices are having such significant
16 site impacts that substantial changes in
17 these practices are necessary to ensure a
18 regenerating conifer forest. Substantial
19 public funds for regeneration are being
20 spent in a questionable, possibly vain
21 attempt to compensate for site changes
22 and degradation caused by harvest
23 practices."

24 Now, in our written argument, Madam Chair
25 and Mr. Martel, we then review our attempts to obtain

1 some quantitative data for the forester's belief that
2 we reproduced at paragraph 564 that:

3 "Tree planting is generally
4 acknowledged to offer the best
5 opportunity for success in achieving
6 prescribed conifer regeneration
7 levels..." this belief that planning is
8 best.

9 We were not able to obtain any such
10 quantitative information.

11 Now, regeneration evidence has been
12 presented to you largely in the case in terms of
13 meeting minimum stocking standards.

14 Ms. Cronk referred to Industry case
15 studies where more than minimum standards were obtained
16 but we suggest we cannot generalize from these few
17 areas and that the OFIA Table 3 results, page 124 of
18 their renewal witness statements, the more
19 comprehensive ones, don't record regeneration to higher
20 than minimum stocking levels.

21 So, once again, our conclusion with
22 regard to the assumed superiority of natural
23 regeneration methods and the -- excuse me, of
24 artificial regeneration methods and the evidence
25 presented to you is in paragraph 559 at page 226, and

1 that is that:

2 "The results of long-term plantation
3 management in Northern Ontario (SOARS I
4 and II..." and George Marek's plantation,
5 "...indicate that even if results
6 appeared positive early in the
7 development of the plantations, in the
8 long term, the artificial regeneration
9 has failed."

10 MR. MARTEL: Maybe you can help me put it
11 in perspective then. You're quoting Mr. Marek and
12 SOARS, and that's two sources, and you dismiss five
13 sources from the five case studies. And I'm trying to
14 get a balance there.

15 Those were five case studies by foresters
16 who regenerated using artificial means in most
17 instances as opposed to Mr. Marek's and the SOARS
18 results, and I'm trying to put that in some sort of
19 context.

20 MS. SWENARCHUK: I don't dismiss them,
21 Mr. Martel. The difference that I'm identifying is the
22 difference between long-term results and, if my memory
23 serves me accurately, the shorter-term results of the
24 OFIA studies. No blame attached to OFIA, they can only
25 provide you with results for the age that the

1 plantations have reached.

2 But, as I recall, those are also perhaps
3 five-year stocking results, I will have to check the
4 exhibit, they're not long-term plantation management,
5 and our concern precisely is this - and I think George
6 Marek's expressed it best - his plantations may have
7 looked great at five years, 10 years, even 20 years,
8 but the longer they're there the more evident the
9 problems become, the more loss accrues to them, and at
10 this point he's concerned that through bugworm damage,
11 as he said, they may be a complete loss. These are
12 plantations that at other times in their history looked
13 very good, and I think the Board heard considerable
14 testimony from Mr. Marek with regard to those
15 plantations.

16 I think at a minimum the Board is
17 entitled to conclude that they have been very closely
18 monitored by him through the entire period of their
19 existence, but I don't dismiss the OFIA results, it's
20 the question of: When can we have any assurance that a
21 plantation is in fact going to produce the kind of
22 yield which, in the view of Forests for Tomorrow, it
23 needs to yield, needs to produce to justify the cost of
24 it.

25 And the state of the evidence before you

1 because of the posity of data with regard to long-term
2 plantation management is not very satisfactory. Now,
3 as far as we're concerned you have two sources only
4 with respect to long-term results. The OFIA results
5 are not so long term, I'm going to deal with them to
6 some extent shortly.

7 MR. MARTEL: But we also had some
8 evidence from Europe. I don't want to make a big
9 comparison between what's going on in Europe and in
10 northern Ontario, but they've been practising intensive
11 management for a long, long time and there must be some
12 reason why they do it. I mean, do they do it -- well,
13 I'm not going to try to answer the question.

14 Why in Europe would they practice this in
15 order to get the type of yields they're getting, which
16 are somewhat higher from smaller countries, and smaller
17 cuts like Sweden, than we do here.

18 MS. SWENARCHUK: I don't want to
19 generalize about the European experience. I think
20 there are a number of sources of information about that
21 on the record, though, and one of them comes from Mr.
22 Mazur and has to do with his reporting to you of
23 concerns now in Europe with regard exactly to whether
24 plantation management is sustainable in the long term.
25 That's one concern.

- 1 Secondly, I want to make a crude
2 comparison between what might be the conditions in
3 northern Ontario with our large cuts, for example, as
4 compared to Sweden with their smaller cuts. I merely
5 wish to bring to your attention that in the particular
6 conditions of northern Ontario which, for example Mr.
7 Benson and Mr. Marek describe as being essentially
8 rather low productivity lands, difficult terrain, harsh
9 climate, that plantation management has been instituted
10 at a very broad scale where only now in a position
11 where perhaps in 10 years we'll start getting long-term
12 result. The results that we have, though, from past
13 suggest that there are real difficulties with that
14 approach.

15 I know that you've heard repeatedly
16 through the hearing about the presumed superiority of
17 artificial regeneration in the future, and that's a
18 concern, that's why we brought to your attention what I
19 think, in fact, is the sum total of evidence you have
20 in support of that presumption.

21 I'd like to continue in the written
22 argument with the next section which deals with the FFT
23 position regarding the use of high cost artificial
24 regeneration.

25 We underline that the key to the current

1 practice of regeneration in Ontario is government
2 funding provided largely through the FMA structures.
3 In Exhibit 925 we saw a total for silviculture on the
4 FMAs to the end of 1988 of \$106-million and some
5 dollars.

6 The MNR has underlined the obvious
7 necessity of funding silvicultural projects and the
8 OFIA has underlined the role of the forest production
9 policy in securing government funding and that's in
10 Chapter 7 of their renewal panel, Exhibit 1137.

11 It is the view of Forests for Tomorrow,
12 that the increase in regeneration activities in the 80s
13 reported in this chapter by the Industry is clearly
14 dependent on the establishment of government funding
15 for it.

16 MADAM CHAIR: Could you remind the Board
17 what the connection is between the FPP and securing
18 government funding?

19 MS. SWENARCHUK: I believe if you look at
20 the Industry panel 8, Madam Chair, Exhibit 1137, there
21 are statements there to the effect that the
22 establishment of the forest production policy played an
23 important role in securing government commitments of
24 funding for the FMA program.

25 Now, the government funding increase has

1 been biased toward artificial regeneration and only
2 recently is MNR paying for modified cutting, and that's
3 in Board interrogatory to you.

4 "While modified cutting decreased
5 during the 80s from its previous low
6 levels, the regeneration efforts were
7 also biased towards the FMA areas to the
8 detriment of the Crown management units."
9 And the OFIA expressed concern about
10 levels of regeneration activities on the CMUs.

11 The report of the FMA Task Force, Exhibit
12 940, indicated that:

13 "FMAs receive preferential treatment
14 over Crown units with regard to funding,
15 stock allocation and protection from
16 end-year spending cutbacks, and that FMA
17 budget requests for silviculture are
18 usually fully funded while Crown units
19 budget on a dimishing base, usually 80 to
20 90 per cent of the previous year's
21 level."

22 Now, the Industry underlined the
23 availability of funding being the key factor in its
24 renewal witness statement quoting Mr. Hynard with
25 regard to the performance by the Industry and the MNR

1 of their respective obligations under the FMAs.

2 The Industry then reported a shortfall in
3 seedling production and funding cutbacks in some areas
4 for silvicultural treatments and documented the
5 reduction in silvicultural activity.

6 It's the position of Forests for Tomorrow
7 and the view of Forests for Tomorrow that this evidence
8 indicates clearly that fewer government funds for
9 regeneration mean less regeneration will be undertaken.

10 Madam Chair, Mr. Martel, I think that
11 flows clearly from the structure and the mutual
12 commitments that exist within the FMAs. It can be seen
13 clearly on the face of the FMAs.

14 And the task force on the FMAs also
15 focussed on the key role of government funding. They
16 indicated that:

17 "It is difficult to determine the
18 correct level of silvicultural activity
19 within an FMA. The FMAs are premised on
20 the requirement that productivity of the
21 forest be maintained if not enhanced. It
22 is becoming evident that funding may not
23 be available to accomplish this unless
24 extensive use is made of natural
25 regeneration. But it is not possible

1 to practise intensive management upon
2 every area harvested and that indeed the
3 best course of action in some cases is to
4 harvest the site and walk away from it."

5 While we would argue with that, but I
6 recall that evidence to you as a further indication of
7 the problem of relying on artificial regeneration with
8 constant highlighting of government funding
9 requirements for future regeneration of forests.

10 The millions of dollars spent in the FMA
11 program at best produced, Ms. Cronk said, not 17 per
12 cent but 33 per cent more stocking artificial
13 regeneration stands at the fifth-year after planting.

14 I agree with her that 17 per cent is an
15 error, however, I do not agree that 33 per cent is the
16 correct figure but rather 10 to 18 per cent is the
17 correct figure and I will demonstrate for you after
18 lunch how we arrived at that.

19 And our conclusion on this problem is
20 really stated at paragraph 566.

21 "Since the...", Industry, "...has
22 demonstrated reduction in regeneration
23 activity consequent on reductions in
24 government funding, and since the Ontario
25 government is currently experiencing

1 drastic revenue shortfalls, it is crucial
2 that the province opt for less expensive,
3 less costly regeneration strategies."

4 This is the crux of the economic problem
5 that Forests for Tomorrow sees with our artificial
6 regeneration strategies and, that is, they're dependent
7 on high levels of ongoing government funding and we
8 think in the the best of times no one can guarantee
9 past one year really, certainly not far into the
10 future, ongoing government funds for any particular
11 program.

12 In the current economic context this kind
13 of strategy, we are concerned, must inevitably fail to
14 deliver because the funding simply isn't going to be
15 there. There have already been cutbacks, there are
16 reasons to be concerned about further ones.

17 I believe that would be an appropriate
18 place to stop before lunch, Madam Chair, Mr. Martel.
19 It's about twelve o'clock.

20 MADAM CHAIR: Thank you, Ms. Swenarchuk.
21 We'll be back at 1:30.

22 ---Luncheon recess at 12:00 p.m.

23 ---On resuming at 1:30 p.m.

24 MADAM CHAIR: Good afternoon, Ms.
25 Swenarchuk. Please continue.

1 MS. SWENARCHUK: Thank you, Madam'Chair.

2 I'd like to turn now to some submissions
3 with regard to the OFIA regeneration results which were
4 summarized in Table 3, page 124 of their renewal panel.

5 And, Madam Chair, Mr. Martel, that table
6 is reproduced at page 214 of the OFIA submissions and I
7 believe it might be helpful to you to have that as I
8 refer to the issue.

9 I have some preliminary comments, first.
10 Ms. Cronk referred in her submissions, as the Industry
11 did during its evidence, to the report prepared by Mr.
12 Nix purportedly having to do with the effects of
13 clearcut size on regeneration, and it's the submission
14 of Forests for Tomorrow that that report is of no
15 assistance to you whatever having been based on a
16 completely unscientific approach.

17 Dr. Hutchinson commented on the lack of
18 scientific validity of that report in his witness
19 statement, and I might just remind you that it was a
20 couple of simple measurements, there's no indication in
21 the report. In fact the methodology did not include
22 looking at all the kinds of variables that would have
23 to be measured in order to identify whether clearcut
24 size in itself was a factor in the rate of
25 regeneration. In fact, Mr. Nix I think had no

1 particular information about the site history of the
2 two sites, simply none of the kind of identification of
3 variables and rigor that would be required for a
4 reliable result were part of that report, and I just
5 refer you once more to Dr. Hutchinson's comments on it
6 in his witness statement.

7 Now, Ms. Cronk referred to the, shall we
8 call it, the Flowers and Robinson cut in her
9 submissions and indicated that the Industry position is
10 that both artificial and natural regeneration should
11 continue to be available for regeneration purposes and
12 that they can, in some circumstances, work well
13 together for the purposes of regeneration, and I
14 believe the Flowers and Robinson exhibit was given to
15 you as an example of that.

16 Well, we agree that both should be
17 available and that we should and will at times use the
18 two together, however, with regard to the regeneration
19 results in that area, I wish to refer you to a number
20 of considerations. It was a large area, the
21 regeneration was assisted by seeding, the area was
22 harvested by a conventional cut and skid method not
23 full-tree harvest, we can assume then that there were
24 natural seeds left on the site.

25 We don't dispute that some large cuts

1 will come back to a good conifer component, but we also
2 remind you of the repeated reference in the evidence
3 before you, right back to sources cited in MNR's panel
4 10 witness statement, that record a large degree of
5 species conversion having occurred in the area of the
6 undertaking in areas that have been harvested. In
7 other words, the Flowers and Robinson photograph is
8 impressive but is not the whole story.

9 Ms. Cronk also referred you to the
10 Industry's case studies that were produced for you in
11 Exhibit 1100 and specifically case study D which
12 concerned three areas of which two were regenerated
13 naturally and one artificially.

14 The fifth-year stocking of the
15 artificially regenerated area was 65 per cent and of
16 the naturally regenerated areas were 53 per cent, but I
17 would like to recall for your attention the comparative
18 costs of those treatments, and that was produced for
19 you in Exhibit 1154 which was an FFT Question 1(a) with
20 regard to panel 4 of the Industry's case.

21 In the case study 4D area block A, which
22 was artificially regenerated, cost \$405.48 per hectare.
23 Those costs include site preparation, planting and
24 tending. Block B and block C, the naturally
25 regenerated areas, cost \$18.38 per hectare and the

1 interrogatory response indicates that these costs
2 are -- I'll read it.

3 "These overall costs per hectare
4 figure in terms of MNR funding provided
5 to Abitibi-Price for the Iroquois Falls
6 Forest FMA are expressed in dollars
7 current at the time of treatment and
8 exclude the cost of nursery stock and
9 herbicide which were provided at no cost
10 by the MNR as per the terms of the FMA."

11 They were, of course, though a public
12 cost. And I think it's also useful to recall the cost
13 of the other case study areas which are also documented
14 in this exhibit.

15 Case study 4A, the cost was \$108.38 per
16 hectare excluding the cost of seed which was provided
17 by MNR. Case study 4B, the cost was \$412.68 per
18 hectare of MNR funding provided to E.B. Eddy under the
19 FMA. This also excluded the cost of herbicide and
20 nursery stock.

21 And case study 4C, cost \$595.83 per
22 hectare exclusive of stock production. Ms. Cronk
23 has -- would you like those figures again, Mr. Martel?

24 MR. MARTEL: Yes, I would.

25 MS. SWENARCHUK: I had started with 4D.

1 Case study 4D block A, \$405.48 to site prepare, plant
2 and tend. Blocks B and C \$18.38 for tending and these
3 costs exclude nursery stock and herbicide.

4 4A, \$108.38 per hectare MNR funding under
5 the FMA. It excludes the cost of seed.

6 Case study 4B, \$412.68 per hectare FMA
7 funding to E.B. Eddy, excludes the cost of nursery
8 stock and herbicide.

9 And 4C \$595.83 per hectare MNR funding to
10 Abitibi-Price under the FMA and excludes stock
11 production.

12 Now, Ms. Cronk has asked you to rely
13 greatly on the evidence contained in these case
14 studies. They are indeed studies with positive
15 results. It's our submission, though, that there isn't
16 a basis in the evidence to generalize the results of
17 these studies across the area of the undertaking.
18 They are undoubtedly studies of good results in terms
19 of stocking. I think the costing element of them is
20 important. And, again, it's the position of Forests
21 for Tomorrow that there's no basis on which to assume
22 that these case studies are representative of efforts
23 across the area of the undertaking.

24 Now, it's the Industry's position that
25 both natural and artificial regeneration are effective

1 and must be available. Forests for Tomorrow agrees,
2 we're looking for a change in emphasis.

3 Now, I'd like to offer some submissions
4 with regard to Table 3 reproduced in the Industry
5 argument at page 214 and I ask that in doing so you
6 look as well at Exhibit 1157 which I copied and
7 provided to the parties.

8 This was a breakdown of natural
9 regeneration methods outlined in that table which we
10 requested at the time of the Industry testimony, and we
11 requested that, Madam Chair, to obtain more information
12 about exactly what was entailed in the areas described
13 in Table 3 as having been naturally regenerated.

14 And I want to return to one of my opening
15 comments here that Exhibit 1157, I think, demonstrates
16 quite clearly that it's important and difficult but
17 important to distinguish between areas treated for
18 natural regeneration and areas regenerating naturally
19 without treatment.

20 And essentially the conclusion that I
21 will ask you to draw from the examination of Exhibit
22 1157, together with Table 3, is that in fact the areas
23 of conifer documented in Exhibit 1157 which received a
24 regeneration treatment produced stocking or produced
25 areas adequately stocked that compare quite favourably

1 with those of Table 3. The Table 3 figures overall for
2 natural regeneration are considerably lower than the
3 figures for treated naturally regenerating areas on
4 Exhibit 1157.

5 Because, in our submission, certainly one
6 of the contributing factors must be that by our
7 calculations the very largest proportion of those
8 naturally regenerating areas appear to have had no
9 regeneration treatment at all, they fall within the
10 classifications on Exhibit 1157 of harvest cut.

11 Now, I'm going to try to give you the
12 figures. If we look at black spruce on Table 3 we see
13 that a total of 23,143 hectares are listed within the
14 naturally regenerating or treated area. The amount of
15 that that was treated with a harvest cut only we see on
16 Exhibit 1157 was 18,960 hectares, that's about 82 per
17 cent of the area, and that resulted in about 61 per
18 cent of the area being stocked to the minimum, so...

19 Shall I repeat that? I know this is
20 tedious but I think the figures should be clear.

21 Page 214, okay. The amount of black
22 spruce considered in Table 3 is 23,143 hectares. Of
23 that, according to Exhibit 1157, 18,960 hectares or
24 about 82 per cent of the area received only a harvest
25 cut, not a seed tree cut or a strip cut, anything like

1 that, but just a harvest cut and that resulted in 61
2 per cent of those areas being stocked to minimum
3 standard.

4 Again looking at Exhibit 1157, 710
5 hectares of black spruce area were scarified and only
6 50 per cent of those obtained minimum stocking levels.
7 The amount of the naturally regenerating black spruce
8 area from Table 3 that got assisted natural
9 regeneration includes the seed tree cut areas 2,776
10 hectares, of which 78 per cent were adequately stocked;
11 and those that received strip cut treatment 697
12 hectares, of which 86 per cent were adequately stocked.

13 Put those two figures together and we see
14 that 3,473 hectares of the black spruce area, or 15 per
15 cent, received a natural regeneration treatment other
16 than harvest cut. Or to look at it the other way: The
17 black spruce totals on Table 3 for natural regeneration
18 with 64 per cent stocked to the minimum are for a land
19 base on which 85 per cent of the area received nothing
20 but a harvest cut. We would describe that as cut and
21 walk away, and I'll come back to that term a little
22 later.

23 Then if we do the same process, tedious
24 as it may be, with regard to jack pine, again putting
25 the two exhibits together, we see from Table 3 that

1 natural regeneration of jack pine on 11,195 hectares
2 led to 58 per cent of the area being adequately
3 stocked. Again, if we look at the breakdown of natural
4 regeneration techniques for jack pine in Exhibit 1157,
5 we see that 285 hectares were scarified, that's 23 per
6 cent of the area, and only 33 per cent of that was
7 adequately stocked. Harvest cut only, or in our view
8 no treatment, was applied to 910 hectares, 76 per cent
9 of the area, and that led to 66 per cent of the areas
10 being adequately stocked.

11 So, again, the majority of the lands
12 naturally regenerated to jack pine received no
13 treatment just a harvest cut, but 58 per cent were
14 adequately stocked.

15 Now, with both these results and others
16 Forests for Tomorrow asks the question: What would
17 have been the results if the natural regeneration had
18 been assisted through modified cuts or other natural
19 regeneration enhancing cuts? What would have been the
20 regeneration results on these naturally regenerating
21 lands if it had not simply been a cut and walk away
22 situation?

23 And fundamentally what we're proposing is
24 that in evaluating Forests for Tomorrow's proposals
25 with regard to stocking from natural regeneration it's

1 appropriate to compare stocking from treated naturally
2 regenerating lands, because we're not proposing
3 wholesale cut and block, it's appropriate to compare
4 stocking from treated naturally regenerating lands to
5 stocking from artificially treated regenerating lands.
6 But, of course, a comparison between artificially
7 treated regenerating lands with naturally untreated
8 regenerating lands will and should demonstrate a
9 substantial increase in stocking on the artificially
10 regenerating lands, otherwise why did we spend all that
11 money.

12 Now, another important variable on which
13 unfortunately we don't have any information is the
14 question of tending treatment. How did the tending on
15 the cut and walk away naturally regenerating lands
16 compare to the tending on the artificially regenerating
17 lands. We also of course don't have details about the
18 site types involved or, again, all those types of
19 information that the Ontario auditor consider critical
20 to evaluating regeneration success techniques.

21 Now, Ms. Cronk suggested that one cannot
22 assume that naturally regenerating areas don't receive
23 tending, we agree with that proposition, we can't make
24 that assumption. On the other hand, we don't have any
25 evidence that cut and walk away naturally regenerating

1 forest lands do receive tending treatments at all, nor
2 do we have any evidence to suggest that they receive
3 tending treatments comparable to those on artificially
4 regenerating lands or even to those on treated
5 naturally regenerating lands.

6 MR. MARTEL: What's that last one?

7 MS. SWENARCHUK: Or even treated
8 naturally regenerating lands.

9 We do, however, in the evidence have
10 reference to the untreated naturally regenerating areas
11 which should cause us to doubt whether tending occurs
12 there.

13 You'll remember Mr. Marek's concerns
14 about what some people have called the silvicultural
15 slums, the junk forests, those regenerating lands on
16 which we don't know what's there, but his concern is
17 that the species that are coming back there are not the
18 commercially preferred species.

19 We also have the evidence of Mr. Hynard,
20 and I haven't copied this, but you may recall Exhibit
21 534A to C.

22 MR. FREIDIN: Which exhibit?

23 MS. SWENARCHUK: 534A to C in which Mr.
24 Hynard gave us information about the size of areas in
25 three categories; those regenerating naturally to

1 preferred species, those artificially regenerating to
2 preferred species, and those naturally regenerating to
3 non-preferred species.

4 I respectfully suggest that it is quite
5 useful to look again at that exhibit in considering
6 these questions.

7 Mr. Hynard described the area naturally
8 regenerating to non-preferred species in response to
9 questions as the cut and walk away area. He indicated
10 that the white area on this exhibit representing that
11 type of land includes areas regenerating to
12 commercially non-preferred species of which the species
13 type could vary by area in the province.

14 He did, however, mention specifically
15 poplar in these areas. And I suggest that areas which
16 are naturally regenerating to poplar after a cut and
17 walk away treatment are areas that are not being tended
18 with herbicides because, of course, that kills poplar.
19 His testimony with regard to this is in Volume 98 at
20 pages 16346 to 50.

21 He also described that area as an area in
22 which harvest occurred but no follow-up silvicultural
23 treatment occurred. He also referred to it as an area
24 in which some regeneration of commercially preferred
25 species would occur within it unassisted by man.

1 Now, our conclusion is that it is
2 unlikely that these areas are receiving tending,
3 they're unassisted regeneration. Similarly, that the
4 untreated naturally regenerating areas included within
5 Table 3 it is reasonable to assume are receiving at
6 least considerably less tending than the artificially
7 regenerating stands, quite possibly no tending, and
8 that these factors are important when one looks in fact
9 at the differences, the proven differences between
10 stocking results from naturally and artificially
11 regenerating stands.

12 Now, Ms. Cronk argued to the effect that
13 Table 3 clearly established that artificial
14 regeneration is significantly more successful than
15 natural regeneration. With that submission we
16 disagree. We consider that what was established is
17 that artificial regeneration is more successful than
18 largely unassisted natural regeneration, untreated
19 natural regeneration probably untended; again, it
20 should be better.

21 However, in conclusion, the table does
22 not provide information regarding the comparative
23 results between artificial regeneration and planned,
24 assisted enhanced natural regeneration, except for the
25 limited areas that we have identified in which the

1 comparison does not show dramatic differences. The
2 differences vary from 10 to 18 per cent but the cost
3 differences presumably are much greater.

4 Now, that's a lot of detail in a short
5 time. Now, we wish to be clear that it is not the
6 position of Forests for Tomorrow that we should
7 continue to cut large areas, eliminate artificial
8 regeneration and leave more untreated areas to nature,
9 to use Mr. Marek's words, but rather that while
10 continuing to use some artificial regeneration we need
11 to use more planned, enhanced, treated natural
12 regeneration techniques, cheaper techniques.

13 Or to put the question another way: Can
14 we continue to concentrate vast amounts of public funds
15 on a small proportion of the land for this relatively
16 small increase in areas satisfactorily stocked. The
17 funding under the Forest Production Policy was
18 intended, was justified on the basis of producing
19 double the volume on artificial stands as on natural
20 stands.

21 In our submission it's not reasonable to
22 believe that the degree of difference we see in these
23 comparisons will lead to such volume differences or, in
24 our submission, any volume differences significant
25 enough to justify continuing these practices, rather

1 it's time to re-evaluate. To quote Ms. Cronk on a
2 different subject, we can't keep all our eggs in one
3 basket.

4 Now, the Board has been understandably
5 concerned with the comparative cost questions as
6 between natural and artificial regeneration and the
7 Board's request for more data led to the silvicultural
8 cost exercise.

9 Now, our reasons for concluding that its
10 findings are of essentially no assistance to the Board
11 are summarized at pages 229 to 234. I'll not take our
12 diminishing time to review all of them, but we
13 respectfully request that the Board consider fully this
14 summary in its consideration of the effect of the
15 study.

16 Just turning briefly to page 230, we have
17 noted in paragraph 570 that:

18 "It is evident from the individual
19 comments included from the various
20 members of the committee that the process
21 and results were highly unsatisfactory,
22 and characterized by a lack of agreement
23 rather than agreement."

24 And:

25 "It is the position of Forests for

1 Tomorrow that this cost comparison
2 exercise is of no assistance to the Board
3 in determining the essential question of
4 whether to move to smaller cuts and more
5 enhanced...", natural, "...regeneration
6 for the following reasons:
7 First, Forests for Tomorrow's...
8 "...silvicultural prescriptions have been
9 significantly changed from those utilized
10 in the "costing exercise". They no
11 longer prescribe many of the specific
12 requirements that were applied by the
13 committee...", in the view of Mr. Benson,
14 "...rigidly". He's given you that
15 opinion in his comments.

16 Secondly that:
17 "Both parts of the exercise are based
18 on questionable data and modelling
19 techniques that make the forecast
20 invalid," and we refer you to the
21 reasoning of Mr. Benson reflected in his comments in
22 the report.

23 Now, in paragraph 574 there of our
24 argument we refer to one of the, in our view, most
25 unfortunate limitations of the costing exercise and,

1 that is, that:

2 "The estimated cost for strip cutting
3 was based largely on the work done by
4 Ketcheson at Nipigon in the late 1970s,
5 and neither the Ministry nor the Industry
6 contributed more current costs to the
7 Committee."

8 Now, in our submission, it's most
9 unfortunate that a committee of professionals in 1992
10 studying this question for the Board were reduced to
11 using costs in an academic article of 13 years ago. We
12 submit it was within the knowledge of the Industry and
13 the Ministry to produce more up-to-date data, realistic
14 data for the study and they did not do so. They have
15 it, we don't have it.

16 It's the position of Forests for Tomorrow
17 that the Board is entitled to draw an inference
18 regarding the parties' failure to produce such
19 important evidence and, that is, that current cost
20 data, had it been produced, would not have supported
21 their position, that is, the position that modified
22 cutting raises wood costs substantially.

23 And we would ask you to consider again
24 the illustrative cost/benefit analysis that Forests for
25 Tomorrow presented you in the evidence of Dr. Muller.

1 It was at least based on, at that time, current wood
2 costs.

3 Now, this completes our assessment of
4 what the evidence discloses regarding the comparative
5 regeneration results, artificial and natural and
6 comparative costs.

7 As you're aware, it's the position of
8 Forests for Tomorrow that a change in direction in
9 silvicultural practice is necessary from current
10 artificial regeneration practices to more use of
11 enhanced, natural regeneration techniques. We have
12 provided our reasons for that in three areas in the
13 written argument and, again, I'd like to give you some
14 sign posts for that.

15 Starting at page 240, we've written
16 regarding a comparison of natural disturbance and
17 harvest effects. At page 248 we've written of the
18 ecological disadvantages of large area clearcuts and
19 artificial regeneration and advantages of smaller cuts
20 and natural regeneration.

21 At 256 and following we've added further
22 advantages of modified cutting and natural regeneration
23 and we have recorded certain conclusions at page 260.

24 Now, just to summarize very quickly -
25 unfortunately, Mr. Martel, because this is where I hope

1 to respond to your question this morning and certainly
2 would be happy to respond to any further questions you
3 have - in the section beginning at page 240, we have
4 talked about comparisons of natural disturbance to
5 harvest effects and, in our submission, there are
6 marked differences between the two in the resulting
7 mosaic, the effects on microsite, the prolific
8 establishment of conifer seedlings after fire, the
9 elimination by fire of less desirable species such as
10 poplar and balsam fir with result in differences in
11 succession and differing effects on nutrient cycling
12 and the forest floor, and we've cited the authors whose
13 evidence contain these details including Marek,
14 Hutchinson, Zane Smith, Mr. Weetman in MNR Panel 10,
15 Ian Thompson and the Brumelis and Carlton papers. We
16 also refer briefly to differences between the effects
17 of blowdown and insect infestations which may also
18 affect large areas as compared to clearcutting.

19 In summary, we've canvassed the evidence
20 to rebut the theory that clearcutting effects mimic the
21 effects of large fires, such that large open clearcuts
22 are ecologically desirable. In our submission, the
23 effects are not at all the same.

24 Now, from pages 248 to 261 we consider
25 the ecological disadvantages of large area cuts and the

1 advantages of smaller cuts and natural regeneration.
2 And we start with this issue in paragraph 637 on page
3 248 submitting that:

4 "There is no doubt that harvesting
5 operations affect the forest, including
6 the macro and micro climate, water, soil,
7 wildlife, flora and vegetation.

8 What is not known is the direct impact
9 of different harvesting operations at
10 different times of the year of different
11 sizes on the variety of site and forest
12 types of the area of the undertaking.
13 Specific research for each type of
14 site and the numerous associated
15 variables is lacking.

16 If harvesting is to occur in an area,
17 the detrimental effects to the
18 environment may be minimized by using
19 smaller cuts and natural regeneration
20 methods as opposed to the larger cuts and
21 possible silvicultural treatments
22 associated with present harvest.

23 Based on existing information, the
24 most important ecological reasons for
25 favoring natural regeneration over

1 artificial regeneration are the retention
2 of species diversity and productivity of
3 the site for all living organisms of the
4 forest."

5 Now, we submit that large cuts cause more
6 risks due to drastic changes in the environment. In
7 paragraph 639, that they require more tending; in
8 paragraph 641, that they have greater hydrological
9 effects, that larger clearcuts compared to smaller cuts
10 for natural regeneration in the same water basin will
11 produce a higher increment of detrimental effects
12 because of the increase in water yield and the
13 concomitant increase in associated detrimental effects.

14 Natural regeneration and the smaller cut
15 area associated with it should produce smaller
16 increases in water yield, reduce sedimentation, lower
17 nutrient ion concentrations in runoff and a lower
18 temperature of water runoff as compared to the
19 clearcutting of an area.

20 Standing blocks or strips of timber
21 throughout the cut-over would help prevent the loss of
22 nutrients and reduce sedimentation within the forest
23 area before it reaches buffer strips around streams.
24 The nutrients and sediments would be retained within
25 standing timber of the cut area.

1 643, we recall evidence that large area
2 clearcutting has led to significant increases in balsam
3 and hardwood components in regenerating stands.

4 Paragraph 644 and 45, that plantation
5 trees are more susceptible to pests than are natural
6 stands. And here are the words of Mr. Marek about the
7 hard lessons that he's learned with pests in the
8 plantations he's managed, as well as the opinion of
9 Zane Smith, that there's reason to be concerned about
10 the stability, another word used by Mr. Marek, of
11 forests created through current practices.

12 Now, Mr. Smith and Dr. Hutchinson also
13 testified to the increased risks from pests in
14 plantations.

15 In 647 we see Mr. Marek's evidence that:

16 "Plantation management requires
17 repeated application of herbicides to
18 control competition."

19 In 650, the seed dispersal question; 651
20 again seed dispersal; in 652 issues of species
21 diversity, and at 654:

22 "Smaller cuts and natural regeneration
23 will also favour diversity of wildlife
24 species and provide more varied habitat
25 than provided simply by moose corridors.

1 The larger the clearcuts, the greater the
2 probability of wind damage to residual
3 trees in the moose corridor."

4 Then paragraph 658 and 659, again, are
5 related to cost questions that the risk of fire and the
6 cost of intensive management away from areas that are
7 prime sites, that is, areas not close to mills, make
8 artificial regeneration economically attractive.

9 We have a concluding section on the issue
10 and the advantages of modified cutting and natural
11 regeneration.

12 Now, I think you've heard considerable
13 evidence that we now use natural regeneration on most
14 of the areas harvested but the evidence also is that
15 it's mostly unplanned or untreated natural regeneration
16 not enhanced. We have submitted that the natural
17 forest, if replaced, could meet the Forest Production
18 Policy requirements. We may recall for you again that
19 the MNR witnesses have not proved that artificial
20 regeneration can; rather Mr. Greenwood believes that
21 the volume requirements of the FPP should be rejected.

22 In paragraph 664 we record that:

23 "Natural regeneration has been
24 described as the "ideal form of stand
25 renewal" since "stands renewed in this

1 way are characterized by a stability and
2 continuity of productivity, resulting
3 from the influence of all components of
4 the complex forest ecosystem".

5 From 665 and 666 and after they are
6 consistent with maintaining natural diversity which is
7 increasingly important in the future, in our view, as
8 global warming adds further uncertainties to questions
9 of forest growth.

10 And our conclusion on these issues is in
11 paragraph 674 and I believe this, in a sense, adds to
12 our response to your question yesterday, Mr. Martel,
13 and I want to take a moment to go through it.

14 In our submission:

15 "Full-tree harvesting, the most common
16 procedure in Ontario, combined with the
17 large clearcuts of sites of low
18 productivity, would logically be expected
19 to exhibit the same detrimental effects
20 as noted on the more productive sites of
21 Hubbard Brook...", study.

22 "Unfortunately, we do not know the
23 magnitude of these detrimental effects
24 over the area of the undertaking, as
25 Ontario has not instituted long-term

1 studies to examine the effect on the
2 long-term productivity of the forest.
3 However, we do know that large clearcuts
4 are more detrimental to sites than
5 smaller cuts; that erosion and nutrient
6 losses increase with the size of the area
7 cut and time that vegetation is kept off
8 the site; and that harvesting and
9 scarification damage the forest floor,
10 can cause erosion and nutrient loss.
11 Most important, we know that these
12 detrimental effects to the site can be
13 reduced by using smaller cuts, less
14 severe scarification methods, harvesting
15 equipment that does minimal site damage.
16 Modified cutting favoring natural
17 regeneration is a procedure that could be
18 applied to replace existing methods to
19 reduce detrimental side effects.
20 Smaller cuts and natural regeneration
21 also serve to "limit the possible harm"
22 of timber operations, and to enact the
23 precautionary principle supported by the
24 Canadian Paper Workers and adopted by the
25 MNR in Direction 90: --

1 MR. FREIDIN: Ms. Swenarchuk, could you
2 advise which portion of paragraph 674 is supported by
3 the one cite that you provided?

4 MS. SWENARCHUK: I believe in fact that
5 the cite is a quote from Exhibit 1604.

6 MR. FREIDIN: Thank you.

7 MS. SWENARCHUK: Mr. Lindgren is going to
8 make submissions to you now with regard to the planning
9 process, Madam Chair, Mr. Martel.

10 MR. LINDGREN: Madam Chair, Mr. Martel,
11 what I'd like to do is make a few brief submissions on
12 the mechanics of the planning process and, for the most
13 part, I'm not going to review the conditions which
14 enjoy all parties' support in the form of the Illing
15 Report, however, I do note that the agreed to
16 conditions are discussed in the FFT written argument
17 but I'm not going to discuss those with you this
18 afternoon.

19 What I'd like to do is highlight some
20 planning matters where there is still some disagreement
21 as between the MNR and FFT and, in particular, I'd like
22 to focus on six topics that relate to planning.

23 The first is the local citizens
24 committee, second is the public consultation
25 requirements, the third is the background information,

1 the fourth is AOC planning, the fifth is issue
2 resolution and bump-up, and the sixth topic is existing
3 monitoring.

4 And I'm turning first to the local
5 citizens committee proposal. You'll find that
6 referenced at page 87 of the written argument submitted
7 by FFT and, in FFT's view, the creation of the local
8 citizens committee is an important and welcomed
9 development in this hearing.

10 FFT also strongly supports the proposal
11 that a member of the local citizens committee be
12 permitted to participate as a member of the planning
13 team and, again, FFT views that as a rather significant
14 breakthrough and we urge the Board to accept that
15 proposal.

16 Now, Mr. Martel, last week you commented
17 that it might be difficult to find a member of the
18 public who's willing to sit as a member of the planning
19 team for extended periods of time without receiving any
20 money and, Mr. Martel, that is a legitimate concern,
21 but it's our respectful submission that that concern
22 can be overcome.

23 In our view, I think it's important to
24 note that there's nothing in the proposal that actually
25 requires the LCC to appoint somebody to the planning

1 team. It's conceivable that not all committees will do
2 so, they could choose to send no one to the planning
3 team or, alternatively, the committee could choose to
4 send a representative on the planning team and that
5 that representative presumably has the choice of
6 spending as much time or as little time as he or she
7 can afford in participating in the process.

8 In our respectful submission, as long as
9 we have people like FFT lay witness Mark Robinson, who
10 you recall was an active member of the Blind River
11 timber management advisory committee, as long as we
12 have people like Mr. Robinson around and interested in
13 timber management planning, I don't think we will have
14 any difficulty in finding volunteers for the LCC or
15 representatives on the planning team.

16 And that's why we urge the Board to at
17 least create the opportunity or create the right of LCC
18 members to be represented on the planning team.
19 Whether or not they care, LCC members care to use that
20 right or exercise that right is of course up to them,
21 but we urge you to at least give them the option.

22 If at the end of the day you still have
23 concerns about a person's willingness to serve as a
24 member of the planning team, then we ask you to
25 consider removing that perceived economic barrier.

1 We're asking you not to remove the right; address the
2 concern about the economics by perhaps considering
3 imposing a condition that might remove the economic
4 impediment; i.e., you might consider a payment of a per
5 diem, and that might be a way of getting around this
6 economic barrier to participation on the planning team.

7 Turning next to the second issue, public
8 consultation, this item is outlined at page 88 of the
9 FFT written argument and here FFT's only significant
10 difference with MNR centers on the type of information
11 available at the first information centre.

12 Now, like the Ministry of the
13 Environment, FFT strongly believes that options and
14 alternatives should be displayed at the first
15 information centre. And this does not, in our view,
16 mean that irrevocable decisions have to be made by
17 planning teams, this does not mean, in our respectful
18 submission, that the public will perceive that
19 irrevocable decisions have been made.

20 FFT submits that where known preliminary
21 preferences as to those options and alternatives should
22 also be made known to the public at the first
23 information centre. As we discuss in our argument:

24 "The plan author's true intentions
25 should not be concealed from the

1 public..."

2 It shouldn't be a shell game, Madam
3 Chair, Mr. Martel, the public should not be left
4 guessing as to the true intentions as to where
5 operations might occur, and that is why it's important
6 that preliminary preferences be identified up front if
7 they're known.

8 Now, the planning team might not have a
9 preliminary preference, but if there is one based on
10 their understanding of the current situation, that
11 should be made known to the public, in our view, and
12 they should be presented as options of course, not
13 decisions, and they should be understood to be options
14 that might be modified or rejected entirely based on
15 public input.

16 The third subject, Madam Chair, is
17 background information. This issue is canvassed at
18 pages 89 to 92 of the argument. The problem here,
19 Madam Chair, Mr. Martel, is that the MNR, in FFT's
20 view, was proposing to collect only certain pieces of
21 information such as FRI data or fish and wildlife
22 information for use by planning teams. Those proposals
23 from the MNR seem to leave out a number of other key
24 forest resources such as information on soil, water,
25 recreational resources, visual resources and so forth.

1 Now, the Board has heard about the values
2 map and that is an item that FFT supports, but it's not
3 at all clear that some of these other resources, such
4 as soil, such as water resources, they may not
5 necessarily show up on the values map and that's why
6 FFT submits that a more systemic approach to the
7 collection and use of background information must be
8 ordered by the Board. You just can't sit and wait for
9 the public or field staff to discover values and have
10 them transferred onto the values map and that's why FFT
11 commends conditions No. 14 and 16 to you.

12 Now, on this subject FFT has also
13 recommended that the MNR be required to conduct what we
14 have called pre-operation inspections in areas that are
15 reasonably likely to be allocated for operations. I
16 want to assure you, Madam Chair and Mr. Martel, this
17 does not mean that every square inch of every unit has
18 to be inventoried. We realize that's impractical and
19 it's too costly; instead we suggest respectfully to you
20 that timber management planners know where current
21 operations are occurring, they know where the existing
22 road network is, they know presumably where the stands
23 are they'd like to harvest and, therefore, it's our
24 submission that they do have a reasonable idea of where
25 operations are likely to occur in the next term but,

1 before those operations occur, a pre-operation
2 inspection should be carried out on the ground.

3 And, again, Madam Chair, Mr. Martel, this
4 is an application of the precautionary principle, it's
5 a look before you leap approach; before you go into the
6 area you should take a good ground level look to ensure
7 that no significant resources or uses or values will be
8 degraded or destroyed by timber management operations.

9 Now, at paragraph 203 at pages 91 to 92
10 we refer to pre-operation inspections and we've
11 indicated that they in fact are carried out by the
12 United States Forest Service, this was evidence
13 presented by Mr. Smith. The transcript references are
14 missing in that paragraph and I'll provide them to you
15 right now. Mr. Smith discussed this issue at a variety
16 of places, but you can find the evidence at Volume 299
17 at pages 53162 and pages 53306 to 7.

18 Now, while I'm on paragraph 203, there is
19 an errata that I'd like to correct. The paragraph says
20 that:

21 "Pre-operation inspections
22 are...carried out in Alberta."

23 It should actually read New Brunswick,
24 and that evidence comes from Mr. Patch who is from New
25 Brunswick and that evidence is found at Volume 354,

1 page 61753. I'll repeat the transcript reference, it's
2 line 3, Volume 354, 61753.

3 I'd like to turn next to the issue of AOC
4 planning, that is the fourth item, and it's an item
5 that's discussed at page 94 to 97 of the FFT argument.

6 Now, when the Board compares the FFT
7 conditions on AOC planning to the MNR proposal you'll
8 see that there is a general similarity between our
9 respective proposals, but I want to be very clear that
10 FFT only supports this AOC planning approach as an
11 interim measure and it's an interim measure pending the
12 development of integrated forest management as required
13 by condition No. 124. And we regard AOC planning as an
14 interim measure because, on the evidence and as
15 described by Mr. Smith, integrated management will
16 provide greater protection to non-timber values than
17 the MNR's AOC process which reflects a constraints
18 approach to the protection of these values.

19 Now, on that issue we would refer the
20 Board to Mr. Smith's evidence on AOC planning, that's
21 found at Volume 298 page 53037. We would also refer
22 the Board to some of the AOC documentation that has
23 been filed in this case and I'm referring specifically
24 to the Red Lake Plan AOC documentation which was marked
25 as Exhibit 893 and, in our respectful submission, that

1 AOC documentation leaves a lot to be desired in terms
2 of quality and completeness and rigor.

3 Now, FFT has a number of other concerns
4 about AOC planning and they're summarized at page 94 of
5 the argument, paragraph 208. And that paragraph
6 essentially sets out the reasons why FFT submits that
7 the Board should order the MNR to undertake a more
8 integrated and comprehensive approach to the protection
9 of non-timber values.

10 The fifth and final issue under planning
11 that I'd like to discuss -- actually, no, it's not the
12 final, there's one more. The fifth issue is resolution
13 and bump-up. FFT supports the MNR's proposed issue
14 resolution process, indeed we support any attempt to
15 resolve land use conflict in a quick and
16 non-adversarial fashion. We believe that the issue
17 resolution process might lend itself well to that
18 process.

19 FFT also supports the MNR proposal that a
20 bump-up mechanism be built into the Board's approval.
21 I should have mentioned that this whole issue is
22 discussed at pages 100 to 103 of the argument.

23 Now, FFT submits that a bump-up mechanism
24 should exist so that particularly significant timber
25 management activities are subject to individual

1 environmental assessment and, therefore, become subject
2 to the external review and approval by the Minister of
3 the Environment.

4 And, again, this harkens back to the
5 discussion we had yesterday on that class EA approach.
6 I'm not going to repeat those submissions, but you have
7 to remember the class EA approach is essentially a
8 self-assessment process.

9 Once this planning process is approved,
10 it's up to the MNR to follow the process to
11 demonstrate, in our view, a need for the project,
12 consideration of the null alternative and so forth.
13 All of that is done without the scrutiny of the
14 Minister of the Environment and that's the reason why
15 we believe a very rigorous process should be imposed.

16 Now, yesterday I referred to the EAAC
17 report No. 48, and that's been marked as Exhibit 1973
18 in this hearing, and EAAC reviewed a number of the
19 problems such as delay and cost associated with recent
20 bump-up requests and the handling of those bump-up
21 requests.

22 Some of that concern over delay was
23 expressed directly to the Board by Mr. Nixon and Mr.
24 Tunnicliffe, and they essentially told the Board that
25 bump-up requests should be decided in a much more

1 timely manner and with this FFT agrees and this is why
2 FFT has proposed that bump-up decisions should normally
3 be made in 90 days, and that is found in Appendix 15 of
4 our terms and conditions.

5 In our respectful submission, that kind
6 of a time frame should minimize the delay and the
7 uncertainty faced by both the requestor and the
8 affected company.

9 The second point on bump-up that FFT
10 would like to make is that no timber management
11 operations should be permitted in areas covered by
12 bump-up requests until a final decision has been made
13 by the Minister of the Environment on the bump-up
14 request.

15 Now, again, the Board heard very strong
16 comments from Mr. Nicholson and Mr. Tunnicliffe in
17 support of that proposition. Their evidence has been
18 reproduced at paragraphs 217 on page 101 and, based on
19 that evidence and as a matter of fairness, FFT submits
20 that no operations should occur in those areas subject
21 to a bump-up request until a decision is made,
22 otherwise the reasons for the bump-up request may well
23 be rendered moot by the continuation of operations and
24 the passage of time.

25 And then, finally, Madam Chair, Mr.

1 Martel, on the issue of bump-up FFT submits that
2 bump-up criteria should be developed and built into the
3 Board's approval. Now, some parties have suggested
4 that that's unacceptable because they take away the
5 Minister's discretion when he or she is considering a
6 bump-up request.

7 Madam Chair and Mr. Martel, FFT disagrees
8 with that view. In our submission, criteria will help
9 structure the exercise of discretion, not eliminate it.
10 FFT also notes that other class EAs such as Exhibit
11 886, the Access Roads Class EA, contain bump-up
12 criteria. Those criteria are used to identify
13 situations where an individual environmental assessment
14 is appropriate.

15 That is why FFT believes that bump-up
16 criteria are necessary because they do assist in making
17 bump-up decisions, they also help potential requestors
18 to know whether or not something should be bumped up.

19 Now, Madam Chair, Mr. Martel, if no
20 bump-up criteria are developed, if no criteria are
21 imposed as a matter of a conditional approval as a
22 result of the Board's deliberations, then we're going
23 to be left with the current situation. You can make a
24 bump-up request, there's no criteria by which they're
25 assessed, and it's simply an ad hoc process.

1 The EAAC report No. 48 discussed that
2 issue and found it to be incredibly unacceptable, and
3 that I've reproduced at page 102 of the argument, the
4 EAAC findings on that point, and that is why, Madam
5 Chair, in conclusion, that FFT submits that bump-up
6 criteria should be developed.

7 Now, I do have a few brief comments to
8 make in relation to monitoring, which is the sixth
9 point, but I see it's 2:40 and perhaps this might be a
10 time for a break.

11 MADAM CHAIR: Yes, why don't we take our
12 afternoon break now. We'll be back at three o'clock,
13 Mr. Lindgren.

14 ---Recess at 2:40 p.m.

15 ---On resuming at 3:00 p.m.

16 MR. LINDGREN: Madam Chair, I'm prepared
17 to start, but I see the other side of the room is empty
18 but I am prepared to move on because zero hour is
19 approaching.

20 The final issue with respect to planning
21 that I'd like to address is the issue of monitoring and
22 that issue is discussed at pages 373 to 396 of the
23 argument.

24 There are two issues I want to briefly
25 touch upon. The first is the issue of compliance

1 monitoring, the second is effects and effectiveness
2 monitoring.

3 Now, FFT defines those terms in the
4 following way: Compliance monitoring is simply
5 monitoring to find out: Are you doing what you're
6 supposed to be doing; effects and effectiveness
7 monitoring: What are the effects of what you are
8 doing.

9 And, Madam Chair, Mr. Martel, I suggest
10 to you that that definition or those definitions are
11 not dissimilar to the ones put forward by Mr. Freidin
12 last week.

13 Now, in relation to compliance
14 monitoring, FFT submits that the Board should require
15 an effective compliance monitoring program and, as we
16 describe in the argument and as Ms. Swenarchuk
17 mentioned this morning, there has been extensive
18 non-compliance within Crown management units and FMAs
19 across the area of the undertaking.

20 Most of that non-compliance appears to be
21 post-1980, in fact, some of it is occurring right up
22 until 1992. You'll see that in the source
23 documentation used to compile that list of monitoring
24 infractions.

25 At page 383 of the argument there's an

1 indication from FFT that FFT finds the rate of
2 non-compliance to be unacceptable. Now, there's been
3 some dispute as between the MNR and FFT: What is the
4 rate of non-compliance, and we've seen a non-compliance
5 rate of 40 per cent and 30 per cent and 15 per cent.

6 Madam Chair, whatever the rate is, it's
7 far too high and it's unacceptable in FFT's view and
8 that is why we have said in the argument that the Board
9 must ensure that the MNR takes a zero tolerance
10 approach to non-compliance.

11 Very simply, Madam Chair, this means that
12 effective compliance monitoring has to be carried out.
13 It also means that the MNR should develop an
14 appropriate investigation and enforcement manual and
15 both of those items are described at pages 388 to 89 of
16 the argument.

17 I would like to spend a moment on effects
18 and effectiveness monitoring which is dealt with at
19 pages 389 to 93 of the written argument. In FFT's view
20 the most important deficiency in the MNR's monitoring
21 proposals is the absence of an effects/effectiveness
22 monitoring program at the local level.

23 Now, the MNR has proposed to record
24 undesirable conditions that appear to be related to
25 timber management. That's found in MNR conditions.

1 FFT sees that as a small step in the right direction
2 but, like several other MNR conditions, it doesn't go
3 far enough in our view, and that's why we say local
4 effects/effectiveness monitoring is required.

5 Now, I am hesitant to use the term local
6 effects/effectiveness monitoring since this seems to
7 set off alarm bells within the MNR. In his submission
8 Mr. Freidin seems to equate local effects/effectiveness
9 monitoring with full-blown multi-year scientific
10 research that, you know, sets out hypotheses, you know,
11 tries to quantify and test causal relationships and so
12 forth. He went on to indicate that is impractical and
13 too costly at the local level.

14 Madam Chair, Mr. Martel, I can't speak
15 for the Ministry of the Environment which has also
16 proposed local effects and effectiveness monitoring,
17 but speaking for FFT I can assure the Board and I can
18 assure the MNR that FFT does not want full-blown
19 multi-year scientific studies at the local level. We
20 don't want scientific studies following up each and
21 every timber management operation that occurs within
22 the area of the undertaking and, instead, FFT
23 contemplates something much more formal, much less
24 costly at the local level.

25 And what we intend is this: Rather than

1 doing these full-blown studies, FFT submits that a
2 systemic attempt should be made to collate and analyse
3 the reports of undesirable conditions, other existing
4 data, other existing information that is routinely
5 gathered at the unit level. Someone should sit down
6 and look at them and determine if there are certain
7 trends or certain problems that are arising.

8 If, for example, a particular provincial
9 guideline does not appear to be working well locally
10 due to terrain or some other local factor, or if a
11 particular silvicultural practice seems to be causing
12 problems for wildlife, then some thought should be
13 given to doing something about those problems or fine
14 tuning the guidelines in terms of their local
15 application or undertaking some further information
16 gathering exercise.

17 This, Madam Chair, is intended to produce
18 the very information that will assist in fine tuning
19 guidelines at the local level and it's very much part
20 of the adaptive management approach advocated by Dr.
21 Baskerville and Dr. Middleton and a number of other
22 witnesses.

23 After all, Madam Chair, the local level
24 is where the rubber hits the road, that is where
25 approved timber management activities get carried out

1 on the ground. That is why, in our view, it's
2 appropriate, desirable and necessary to have some form
3 of effects and effectiveness monitoring at the local
4 level.

5 We are not hung up on that term, we can
6 call it something else to appease Mr. Freidin, the
7 point is that work has to be done at the local level,
8 and the provincial level studies that we have heard
9 about from the MNR are simply not adequate substitutes
10 for that local information.

11 Madam Chair, I'd like to turn next to
12 another subject that has been discussed briefly by Mr.
13 Martel and Ms. Swenarchuk, and that is the whole issue
14 of biodiversity and wildlife. I should say I'll
15 commence the discussion and then Ms. Swenarchuk will
16 continue with particular reference to silvicultural
17 issues.

18 Now, Madam Chair, Mr. Martel, the MNR has
19 claimed in some of its evidence that timber management
20 activities have not adversely affected biodiversity
21 within Ontario and you heard this, for example, from
22 Mr. McNicol during reply panel No. 2. However, Mr.
23 McNicol admitted during cross-examination that the MNR
24 had conducted no studies whatsoever to support that
25 claim, and the transcript reference is Volume 386, page

1 66564 to 65.

2 The Board will also recall that during
3 Ms. Swenarchuk's cross-examination during MNR Panel 10,
4 Dr. Euler confirmed that the MNR had conducted no
5 scientific studies for the purposes of presenting
6 evidence on the environmental impact of timber
7 management on wildlife.

8 In our view, Madam Chair, those are
9 significant admissions by this proponent because they
10 indicate that there's little or no evidential support
11 for the MNR's claim that timber management does not
12 significantly affect biodiversity or wildlife in this
13 province and, indeed, Madam Chair, there is evidence
14 before you to the contrary. Some of that evidence is
15 summarized and referenced at page 269 to 70 of the FFT
16 written argument, it's referenced in other spots as
17 well. Wildlife concerns are also reproduced in
18 Appendix A to FFT's final submissions.

19 The Board also heard about wildlife
20 impacts from Dr. Welsh who spoke of timber management
21 impacts on songbirds. The Board heard from Dr.
22 Thompson on impacts of timber management on marten.
23 The Board heard evidence from the OFAH on similar
24 issues and, indeed, Dr. Euler during his testimony
25 acknowledged that effects on wildlife are possible as a

1 result of timber management activity.

2 I believe it's fair to say that there's
3 no dispute that there are at least potential impacts on
4 wildlife and the issue boils down to this: Some
5 species may well benefit from timber management
6 activities, other species do not. The only real issue,
7 I submit to you that is left for the Board to deal with
8 is: Are the MNR's proposals sufficient to mitigate
9 those impacts upon wildlife and biodiversity, and it's
10 our respectful submission that they are not.

11 Now, I've organized my submissions to
12 answer three main questions in relation to
13 biodiversity. The first is: What is biodiversity and
14 why should we manage for it. The second question is:
15 What is wrong with the MNR's wildlife proposals, why
16 won't they take care of wildlife and biodiversity.
17 Thirdly: How are the FFT conditions respecting
18 wildlife and biodiversity intended to work, and I'll be
19 spending most of my time on that third subject.

20 Turning to the first question: What is
21 biodiversity and why should we care about it, and this
22 issue of biodiversity has been raised of course by
23 Forests for Tomorrow, it's been raised by the OFAH,
24 it's been raised by a number of other witnesses
25 including Drs. Welsh and Thompson and Dr. Abraham in

1 reply.

2 And, in FFT's view, when the Board
3 reviews their evidence there's a remarkable similarity
4 in the definitions of biodiversity that have been put
5 forward by these witnesses to the Board. Now, FFT has
6 reproduced six of these definitions at pages 273 to 74
7 of the written argument, and as you go through these
8 definitions you'll see that they boil down to a
9 consensus on what biodiversity is.

10 And I believe the consensus can be
11 expressed as follows: Biodiversity is an
12 all-encompassing term which refers to the variety and
13 variability of all the living organisms and the
14 ecosystems in which they occur and the term includes
15 genetic diversity, species diversity and ecosystem
16 diversity. We urge that that definition be accepted by
17 the Board and we submit it's been reflected in the FFT
18 submissions in condition 53.

19 So that's what biodiversity is. Why
20 should we care about it, why do we need to explicitly
21 manage towards biodiversity objectives as FFT and other
22 parties have suggested?

23 And the reason is this, Madam Chair:
24 There are a number of benefits associated with
25 maintaining biodiversity within the area of the

1 undertaking and within the Province of Ontario.

2 These benefits have been recognized
3 provincially, nationally and internationally. The
4 benefits have been discussed by Drs. Suffling and
5 Middleton on behalf of FFT, they have also been
6 discussed in the Wildlife Strategy Document, Exhibit
7 2065, which was prepared by the Ontario Wildlife
8 Working Group and, in particular, I refer the Board to
9 page 41 of that document:

10 In short, Madam Chair, Mr. Martel,
11 there's a wide-spread, if not universal, recognition of
12 the need to maintain and conserve biodiversity. And
13 without pursuing that issue any further, I can refer
14 the Board to pages 274 to 75 of the argument where you
15 see references to the Canadian Council of Forest
16 Ministers, the Bruntland Report, the Directions 90
17 document, all of those documents recognize the need to
18 maintain biodiversity and also recognize a public
19 expectation that biodiversity will be maintained in our
20 forests.

21 It's in light of those benefits, Madam
22 Chair, that FFT submits that the goal of maintaining
23 biodiversity should be expressed not only in your
24 decision but in the conditions attached to the approval
25 if the Board chooses to issue an approval, and if the

1 Board does give an approval to proceed, then FFT urges
2 the Board to impose a condition which stipulates that
3 the MNR should ensure that timber management activities
4 are planned and carried out in a manner that does not
5 adversely affect or reduce biodiversity within the area
6 of the undertaking. That's a fundamentally important
7 principle, Madam Chair, and we believe it should be
8 reflected in your conditions.

9 Now, this does not mean that a single
10 tree or a single blade of grass cannot be cut or harmed
11 within the area of the undertaking; to the contrary,
12 FFT fully recognizes that harvesting and other timber
13 management activities can and should occur and continue
14 to occur within the area of the undertaking. We also
15 recognize that where operations are carried out there
16 may well be some habitat, some ecosystems which may be
17 eliminated as a result of cutting or as a result of
18 other timber management activities, at least until the
19 cut-over recovers.

20 But, in the long term, Madam Chair, Mr.
21 Martel, FFT submits that, for example, cuts must be
22 planned and implemented in a manner which ensures that
23 no ecosystem types are eliminated from the landscape.
24 If ecosystem types that are out there now, if they are
25 eliminated from the landscape or if they are

1 significantly or functionally degraded for the
2 long-term, MNR view the goal of maintaining
3 biodiversity may well be jeopardized to the detriment
4 of wildlife and indeed to the residents of wildlife.

5 Again, that is why FFT submits that there
6 should be a goal of maintaining biodiversity and we
7 further submit that that goal should take precedence
8 over other resource goals, targets and objectives.

9 Thus, where timber management operations
10 might conflict with this higher order goal, then the
11 proposed operations should be discontinued, modified or
12 moved elsewhere.

13 And, Madam Chair, Mr. Martel, that is a
14 fundamentally important principle and it's been
15 recognized by MNR itself through Dr. Abraham's
16 testimony and this is found at Volume 390 of the
17 transcript at pages 67234 to 37, and the key portions
18 of that transcript have been reproduced at page 277 of
19 the written argument.

20 Turning to the next sufficient matter,
21 Madam Chair, one of deficiencies of the MNR's current
22 approach to this issue is dealt with at page 281 to 300
23 of the FFT written argument. In our view the
24 deficiencies may be summarized under the five following
25 points. Firstly, the MNR's traditional definition of

1 wildlife is inadequate and it represents only one per
2 cent of the species of Ontario, it excludes most of the
3 flora and fauna, or flora and invertebrates and
4 microorganisms that might exist in Ontario and, Madam
5 Chair, that matter is discussed at page 272 and at
6 pages 282 to 83 of the argument.

7 The second deficiency, in our view, Madam
8 Chair, is that the MNR lacks a provincial wildlife or
9 biodiversity policy and, in FFT's view, this lack of
10 policy demonstrates that timber is still king in the
11 MNR.

12 Now, you'll recall that the MNR developed
13 a provincial timber policy, we've got the FPP that was
14 developed some 20 years ago, it's still in place, and
15 we hear that the MNR is busy working on the new timber
16 production policy, or so we're told, we haven't seen it
17 but we're told work is underway, yet in the past 20
18 years MNR has not developed a provincial wildlife
19 policy or a biodiversity policy, and Dr. Balsillie was
20 unable to tell the Board when such policies might be
21 improved or what might be in them.

22 Now, the Board has also been told that
23 the MNR supports the principle of maintaining
24 biodiversity, the MNR has told the Board it's pursuing
25 this goal through a policy framework, and on this issue

1 I would refer the Board to paragraphs 721 to 22 at page
2 284 of the argument.

3 But despite the MNR's professed support
4 for the principle of maintaining biodiversity, it
5 should be noted that principle is not reflected
6 anywhere in the MNR's terms and conditions, it's just
7 not in there at all.

8 Now, you'll recall Madam Chair, Mr.
9 Martel, that FFT cross-examined on that very point
10 during the MNR reply evidence and the MNR witnesses
11 claim that, for example, biodiversity is just too
12 general to put in the form of a condition. To the
13 contrary, Madam Chair and Mr. Martel, FFT submits that
14 this principle is too important to leave out of
15 conditions that will govern the planning of access,
16 harvest, renewal and maintenance for the next 20 or 30
17 or more years.

18 In addition, and as indicated in FFT's
19 argument at pages 278 to 80, that principle of
20 maintaining diversity has been expressed in U.S. Forest
21 Service regulations for at least the past decade and,
22 in our view, that clearly rebuts any suggestion that
23 biodiversity or biodiversity conservation is too
24 general to express in a legal manner.

25 The third deficiency, Madam Chair, is

1 that the MNR's wildlife proposals do not ensure the
2 protection of vulnerable, threatened or endangered
3 species from the effects of timber management. And
4 this is summarized at pages 287 to 88 of our argument,
5 and in paragraph 729 at page 288 we make reference to
6 the fact that in practice and as a percentage of the
7 land base eligible for harvest very few reserves are
8 actually established for the protection of wildlife
9 and, in our view, this provides the Board with further
10 evidence of the gap between the theory of mitigation
11 and the actual practice in the field.

12 Now, the fourth deficiency, Madam Chair,
13 is this: The MNR's featured species approach is
14 fundamentally deficient and, in a nutshell, there's no
15 scientific evidence before this Board that using the
16 featured species approach or using the moose habitat
17 guidelines will take care of 70 per cent of the
18 terrestrial species in this province let alone the 30
19 per cent of species that don't benefit from the moose
20 habitat guidelines.

21 Now, this whole issue of featured species
22 management and its deficiency is dealt with at pages
23 289 to 96 of the argument and, in particular, at pages
24 292 to 94 we list some two dozen deficiencies and
25 fallacies associated with the featured species approach.

1 I don't propose to review them in any
2 detail right now, largely because the MNR itself has
3 now recognized the deficiency of featured species
4 management and here I'm referring to Exhibit 2089 which
5 is an MNR memo on wildlife monitoring. And this whole
6 issue is discussed at pages 290 to 91 of the written
7 argument.

8 I'd also refer the Board to the recent
9 ESSA paper on the effects of timber management on
10 wildlife and that is Exhibit 2275, pages 16 to 17.

11 And in light of those deficiencies, Madam
12 Chair, the MNR has indicated that it is now willing to
13 move from its current featured species approach towards
14 more explicit biodiversity management. And at page 285
15 of our argument I've reproduced a portion of the MNR
16 reply panel No. 3 where they've indicated they will be
17 making this transition to more explicit biodiversity
18 management.

19 Now, Madam Chair, Mr. Martel, that's a
20 significant development and it's one that's welcomed by
21 FFT, but when we see the MNR's terms and conditions
22 there's no indication that the MNR is going to commit
23 to doing any of this. At most the MNR has committed
24 only to examine landscape management methodologies.
25 In FFT's view, this condition really amounts to nothing

1 and, indeed, given the MNR's track record in developing
2 other initiatives like the new timber production
3 policy, like the long promised review of the district
4 land use guidelines, FFT simply has no confidence that
5 the MNR will move in an expeditious manner towards
6 biodiversity management in this province, and that is
7 why we submit that the Board should impose clear
8 conditions with clear deadlines so as to ensure that
9 the MNR does in fact move beyond the status quo of
10 featured species management towards broader
11 biodiversity management.

12 Now, the fifth and final deficiency of
13 the MNR's approach is this and, that is, the use of the
14 existing wildlife guidelines and manuals to implement
15 featured species and to protect other wildlife are
16 simply deficient. This issue is dealt with at pages
17 296 to 300 of the argument.

18 Now, on this issue FFT notes that the
19 efficacy of these guidelines, such as the moose habitat
20 guidelines, has never been demonstrated. The moose
21 habitat guidelines now are only being studied and in
22 the long term MGEM studies that Dr. Abraham described
23 in relation to the moose habitat guidelines. We've
24 also heard Dr. Bendell testify that using the moose
25 guidelines can result in fewer species and lower

1 numbers of species, and that's found at Volume 292,
2 pages 52086 to 103.

3 We've also heard Dr. Welsh and Dr.
4 Quinney and others tell us that the guidelines alone
5 will not be sufficient to protect biodiversity.

6 And, Madam Chair, that's why FFT is
7 particularly concerned about this so-called interim
8 direction respecting the moose habitat guidelines which
9 permits cuts of up to 260 hectares without any special
10 approval requirements and which permits cuts greater
11 than 260 with some additional documentation
12 requirements.

13 In our view, Madam Chair, those
14 excedences of the guidelines conflict with the MNR
15 commitment to using the guidelines to protect or
16 provide habitat for at least 70 per cent of the species
17 in Ontario that benefit or are presumed to benefit from
18 the moose habitat guidelines. And, Madam Chair, that's
19 not just FFT's view, that view is shared by an FMA
20 audit team which recently looked at the Bright Sands
21 FMA and they expressed similar concerns about not using
22 the guidelines even where moose habitat is judged to be
23 of poor capability. And, Madam Chair, that reference
24 is reproduced at page 298 of the FFT argument.

25 And that is why, in our view, Madam

1 - Chair, in light of those fundamental deficiencies MNR
2 must move towards landscape management or biodiversity
3 management sooner rather than later and Dr. Abraham
4 seems to agree with this proposition.

5 I asked him if you want to protect
6 biodiversity shouldn't you be carrying out integrated
7 management and he agreed with that proposition, and
8 that exchange is reproduced at page 300 of the written
9 argument.

10 Now, Madam Chair, this brings me to the
11 third and final issue I want to address and, that is:
12 How are FFT's biodiversity proposals intended to work.

13 This issue is discussed in detail at
14 pages 300 to 326 of the written argument. We offer a
15 development of landscape management at page 305, and
16 the Board will recall that the Board heard considerable
17 evidence on biodiversity management from Drs. Bendell,
18 Middleton and Suffling during the FFT case and their
19 evidence essentially concluded that the MNR should
20 undertake a two-stage approach for dealing with
21 wildlife biodiversity and timber management within the
22 area of the undertaking.

23 The first stage is that the MNR should
24 maintain and manage ecosystem types in proportion to
25 their occurrence in the natural landscape. Simply put,

1 Madam Chair, Mr. Martel, that means that the MNR in the
2 planning of timber management activities should ensure
3 that no ecosystem types, like old growth or riparian
4 habitat, no ecosystem types should be eliminated from
5 the landscape; instead the MNR in planning timber
6 management activities should ensure a continuing supply
7 of all ecosystem types in perpetuity. So that's what
8 the first stage is all about.

9 The second stage is that in the context
10 of this overall landscape management approach the MNR
11 should undertake special management and monitoring of
12 particular species such as ones with specialized
13 habitat requirements, like snag dwellers.

14 And this second stage does not exclude
15 featured species management. Our witnesses fully
16 acknowledged that featured species management could and
17 probably would still occur at the local level but it
18 has to be carried out in a manner that does not
19 compromise overall biodiversity goals.

20 Now, as I've mentioned earlier, parties
21 other than FFT have advocated a biodiversity approach.
22 The OFAH has mentioned the need to explicitly manage
23 for biodiversity, Drs. Welsh and Thompson did so as
24 well, their evidence is found in Exhibit 2242A, that's
25 Dr. Welsh's witness statement, and Exhibit 2240 which

1 is Dr. Thompson's witness statement, and the idea is
2 essentially to maintain wildlife diversity through the
3 continuing provision of habitat or ecosystem diversity.

4 And that, Madam Chair, eliminates the
5 need to take a species by species approach to the
6 planning of timber management activities or their
7 impacts on habitat. And the idea is by providing
8 ecosystem diversity similar to that found in the
9 natural landscape then you'll be taking care of all the
10 species which have adapted to and existed within that
11 natural landscape.

12 Now, in carrying out landscape management
13 or ecosystem management there's no magic in the
14 phraseology, Madam Chair, planning teams should be
15 attempting to simulate natural disturbance and
16 successional patterns.

17 Now, on this issue the Board will recall
18 that when FFT first presented its proposals on
19 biodiversity Drs. Suffling and Middleton presented some
20 specific quantitative objectives on patch size and
21 shape and distribution, and it was their belief that
22 these were the parameters necessary to ensure a
23 sustainable landscape.

24 Now, those objectives were criticized as
25 being too specific and too inflexible. That's a

1 familiar song in this hearing.. So FFT ended up
2 dropping those objectives and the FFT position is now
3 leaving it up to the MNR to develop standardized
4 descriptions of natural disturbance patterns and to
5 develop a range of acceptable cut sizes.

6 So our point is simply this: The ball is
7 squarely in the MNR court to develop appropriate
8 descriptions of natural disturbance patterns and a
9 range of acceptable cut sizes and we expect that that
10 will be done and should be done with full public
11 participation. If FFT couldn't get the numbers right,
12 the MNR has now got the onus of getting the numbers
13 right.

14 And since the idea, Madam Chair, is to
15 simulate natural disturbance patterns, it's clear to
16 FFT that certain present silvicultural practices will
17 have to change, and that is explained at pages 307 to
18 10 of the FFT argument where a number of transcript
19 references are provided.

20 Now, the evidence essentially boils down
21 to two general statements: Firstly, there should be a
22 range of cut sizes to simulate natural disturbance
23 patterns, and Ms. Swenarchuk will be describing that in
24 a little more detail in a few moments. The second is:
25 Most cuts should be in relatively small patches.

1 Now, the evidence of Dr. Suffling and Dr.
2 Hutchinson did discuss fire size, fire occurrence, fire
3 frequency and so forth. Dr. Suffling's evidence at
4 Volume 293 at pages 52247 to 55 indicated that while
5 there are some big fires, most of them are not big,
6 most of them are quite small, and that is a pattern
7 that we should be attempting to emulate.

8 And as Ms. Swenarchuk will indicate in a
9 few moments, large area clearcutting is qualitatively
10 and substantively different from that natural
11 disturbance pattern; clearcutting does not simulate
12 fire, it is not the closest proxy to fire. Ms.
13 Swenarchuk will describe that in a few moments.

14 Madam Chair, I stand corrected, she
15 already did that.

16 And this is where FFT's silvicultural
17 proposals fit in. You've got an overall biodiversity
18 goal, you've got specific biodiversity objectives such
19 as don't eliminate ecosystem types; that is, don't cut
20 it, don't harvest it unless it can be regenerated, and
21 that's why the forester's ability to regenerate an area
22 is critically important to the success of biodiversity
23 management.

24 And that's an issue I put to Dr. Welsh
25 when he testified before the Board. This is found in

1 Volume 383 at page 66210, and I asked Dr. Welsh:

2 "So I understand it correctly, if a
3 forester has silvicultural concerns about
4 his or her ability to regenerate a
5 particular ecosystem after clearcutting
6 or large area clearcutting, then the
7 forester should normally look at other
8 cutting practices or maybe even other
9 sites. Is that what you're saying?"

10 Answer is:

11 "Yeah, that seems to me to make only,
12 you know, very basic common sense, if
13 we're interested in biodiversity
14 conservation. How can we eliminate whole
15 forest cover type from township after
16 township, not be able to replace it
17 and say we're being environmentally
18 responsible. And that just seems to be
19 counterintuitive to me."

20 And that's why, for example, Madam Chair,
21 Mr. Martel, FFT has suggested a 100-hectare guideline,
22 and make no mistake about it it is a guideline, with
23 respect to clearcutting, and that guideline is prompted
24 in part by concerns over the need to protect sites to
25 maintain site productivity and it also reflects

1 concerns about habitat and so forth.

2 Now, cuts greater than a hundred hectares
3 can still be undertaken under FFT's proposals but we
4 submit that the rationale should be documented, not
5 unlike the exemption process that we see in the moose
6 habitat guidelines. So, for example, if you do need a
7 bigger cut for biodiversity reasons, and if you can
8 document them, then you've got no problem under FFT's
9 proposals with going with a larger clearcut.

10 We hear often about the woodland caribou
11 example. If you need a big cut for woodland caribou,
12 that can be undertaken under FFT's proposals, there's
13 no prohibition on that, in fact that kind of a cut is
14 encouraged where you can identify a biodiversity need.

15 Now, Madam Chair, I want to spend a few
16 moments in closing on the issue of old growth because
17 there's a tendency to see old growth as a matter that's
18 separate and distinct from biodiversity conservation.
19 In FFT's view that's not the case at all.

20 Within the context of FFT's biodiversity
21 management approach, the MNR will be developing
22 explicit objectives for maintaining and conserving old
23 growth ecosystems within the area of the undertaking.
24 But we have also heard that in fact there are stands of
25 old growth in Ontario, stands that are not currently

1 protected by some of the MNR's interim strategies.

2 Some of those old growth forests may in fact be
3 harvested by the time any of the MNR's old growth
4 proposals are implemented.

5 Now, this whole issue of old growth is
6 discussed at pages 313 to 325 and old growth values are
7 specifically discussed at pages 316 to 17. And in
8 light of those values and in light of the real
9 continuing risk to old growth stands in this province,
10 FFT is asking you to go beyond the MNR's old growth
11 proposals, we're asking the Board to impose conditions
12 which provide real and meaningful protection for old
13 growth in the short term and long term. These
14 proposals are summarized at page 322 of the argument.

15 And again, Madam Chair, this is part of
16 the look before you leap approach. We're asking that
17 the MNR develop appropriate old growth definitions,
18 we're asking the MNR to go out and inventory these
19 areas before they're cut, we're asking the MNR to set
20 aside and protect particularly significant or
21 representative old growth areas, again, before they're
22 cut.

23 That's, Madam Chair, the sum and
24 substance of FFT's old growth proposals and that is the
25 conclusion of our submission on biodiversity. Some of

1 the issues I've addressed will be picked up by Ms.
2 Swenarchuk.

3 MS. SWENARCHUK: Madam Chair, Mr. Martel,
4 we're rapidly running out of time. I have really two
5 subject areas left to address to you, I'll be having to
6 shorten and eliminate some.

7 The first has to do with our
8 silvicultural prescriptions, and before moving to them
9 I do want to refer to what we have described as the
10 shifting sands of MNR's clearcut size position.

11 Now, at the beginning of this hearing and
12 within the Ministry's case, and I'd suggest this is
13 true in their panels 9 and 10, we heard the frequent
14 reference to the model of fire, that fire has certain
15 effects on the landscape, clearcutting has similar
16 effects and, therefore, we can, perhaps even should cut
17 large areas.

18 You understand now the FFT response to
19 that which is that the effects of the two are very
20 different. The fundamental problem I think that that
21 position creates for the Ministry and the Industry is
22 that if clearcutting is like fire we should get conifer
23 stands back after we clearcut the way we get them from
24 fire.

25 This summer in MNR's reply evidence I

1 think you heard a new position on this question and,
2 that is, large clearcuts are necessary for the
3 protection of biodiversity, and we find that in the MNR
4 reply evidence critiquing FFT's then silvicultural
5 prescriptions.

6 I think there are a number of
7 inconsistencies in that position from the Ministry.
8 First, that there's nothing in the Ministry's own terms
9 and conditions that suggests it has a goal of
10 protecting biodiversity in timber management plans.

11 Second, that with this argument, as Mr.
12 Lindgren mentioned, we frequently heard the example
13 given of woodland caribou, but woodland caribou as the
14 evidence discloses live in relatively limited areas of
15 the province.

16 And, thirdly, the Ministry is still using
17 featured species management, basically producing moose
18 and deer, rather than using a biodiversity protective
19 approach.

20 And, lastly, the Ministry has not
21 expressed any concern with regard to the loss of
22 biodiversity that results from large contiguous
23 cut-over areas. So we don't find that position from
24 the Ministry a very credible one.

25 During that evidence also a third

1 position developed and, that is, that small clearcuts
2 would cause problems with forest fragmentation. Again,
3 to my knowledge, there was no concern addressed in the
4 evidence of the Ministry's case with issues of forest
5 fragmentation. To our knowledge the Ministry doesn't
6 have any strategies to prevent it now and, to my
7 memory, it was never referred to as a possible effect
8 of timber management during the Ministry's case.

9 The fourth and final new position, also
10 in reply evidence, I'll interpret thus: Cuts are
11 actually small now, and I reviewed this morning the
12 evidence with regard to cut sizes that you've heard
13 throughout the case and you'll understand that it's
14 FFT's position that the cuts are not small now.

15 But suddenly the Ministry, while arguing
16 against FFT's proposals for smaller cuts, at the same
17 time now claims to be using them. An internal
18 contradiction of position.

19 Now, in our written submissions at pages
20 261 to 269 we deal with the question of why clearcut
21 regulations or guidelines are necessary. If I had more
22 time I wanted to review those submissions with you. I
23 simply will ask you to refer to them yourself in order
24 to move on to the question of Forests for Tomorrow's
25 revised and final terms and conditions with regards to

1 silvicultural planning.

2 Before I do that, I wanted to correct
3 what may have been an incorrect impression this
4 morning. I wanted to clarify for the record that with
5 respect to the contiguous cut-over area in the Gordon
6 Cosens Forest disclosed on the map that I discussed
7 with you this morning, the estimate of 20,000 hectares
8 within that cut-over area is an estimate made by
9 Forests for Tomorrow, and I think it's apparent on the
10 face - the Board can look at it itself - but I do want
11 to clarify for the record that the clearcut exercise
12 committee didn't make that estimate, that was from
13 Forests for Tomorrow.

14 Now, lurching through silvicultural
15 planning, it's in Forests for Tomorrow's terms and
16 conditions starting at page 11. Now as, Madam Chair,
17 has remarked several times on the record the overall
18 direction of Forests for Tomorrow is clear. My client
19 favours a trend towards smaller cuts and more natural
20 regeneration but consistent with the need to protect
21 biodiversity.

22 To that end we have consistently proposed
23 silvicultural prescriptions that point in that
24 direction. In Forests for Tomorrow's previous terms
25 and conditions the silvicultural direction was outlined

1 in guidelines but the Ministry and Industry foresters
2 considered them immutable laws as, for example, during
3 the unsuccessful costing exercise and in MNR final reply
4 evidence.

5 Although it was the view of Forests for
6 Tomorrow that such an interpretation was mystifying in
7 its rigidity since the relevant terms and conditions
8 were repeatedly described as guidelines and the wording
9 changed to read guidelines, Forests for Tomorrow did
10 share a concern with foresters from the Ministry and
11 the and Industry; namely, the concern for flexibility
12 and the reasonable exercise of professional judgment in
13 making silvicultural decisions.

14 However, the references to professional
15 judgment constantly relied upon by Ministry and
16 industrial foresters, like the claim that harvesting
17 and renewal are now integrated in Ontario, in the view
18 of Forests for Tomorrow, disguises a fundamental
19 contradiction; namely, that the professional judgment,
20 in fact, results in very large areas being treated for
21 uniformly for harvesting without differences for site
22 variation.

23 Variations in harvest practice for the
24 purpose of protecting site productivity and using the
25 least expensive method of regeneration given the site

1 characteristics do not, in the view of Forests for
2 Tomorrow, appear to be part of the exercise of
3 professional judgment in many large areas of Ontario.

4 The uniformity of harvest practice, the
5 reduction and amounts of modified cuttings since the
6 inception of the FMAs, these suggest that while
7 foresters may be exercising professional judgment and
8 utilizing the regeneration techniques for which the
9 public pays, the harvest technique appears to be
10 cookbook forestry. MNR and the Industry foresters
11 agreed that the standard practice consists of clearcut,
12 plant and spray.

13 Now, Forests for Tomorrow's forester and
14 scientific witnesses, Hutchinson and Mazur, Benson,
15 Marek and Smith are all individuals who testified to
16 the limitations of this technique and the desirability
17 of working with nature not against it in achieving
18 successful regeneration - that's the wood supply
19 question - and in achieving sustainability of the
20 forest for all its other values, biodiversity,
21 non-timber value concerns.

22 The forest industry in this province is
23 built on the natural forest. It seems imminently
24 reasonable to Forests for Tomorrow that replacement of
25 harvested lands with forests similar to what was there

1 before will provide a sustainable wood supply to the
2 Industry. Had this been done in the past, we would not
3 now be faced with species conversion, the proliferation
4 of hardwood in previously coniferous stands, and local
5 wood supply shortages.

6 I regret the pace, Madam Chair, but it
7 will be on the record for you. Local wood supply
8 shortages, here I recall Mr. Martel's comments at one
9 time during these hearings that there are ghost towns
10 all over the north.

11 Now, Forests for Tomorrow's position
12 regarding harvest and regeneration is founded on the
13 conviction that protection of natural processes is
14 fundamental to the sustainability of the forest and,
15 hence, the terms and conditions 27 and 28 which
16 establish principles and criteria for planning based on
17 natural processes and the natural forest.

18 Again, keeping in mind that these
19 sections describe general principles and criteria for
20 planning related to the guidelines of article 29, we
21 hope the general direction is clear, to use harvesting
22 techniques that do not cause site damage, and that's in
23 articles 27(1) and (2), 28(c)(d)(e)(f)(g) and (i); to
24 respect natural processes and the complexity of the
25 forest ecology, articles 27(1), 28(a) and (b); to

1 utilize artificial regeneration for which public funds
2 are increasingly limited only when economically
3 justified and not as standard practice for a small
4 portion of the total cut with little or no treatment,
5 natural or artificial, for the largest part of the cut.

6 Some years ago literally Mr. Martel
7 identified the problem of trying to reconcile
8 reasonable forester professional judgment with the
9 reform agenda, that is, how do you ensure that the
10 message gets through and is respected except by
11 drafting very restrictive language.

12 We have grappled with this problem
13 throughout the hearing and have listened to other
14 parties and so have considerably changed our
15 silvicultural guidelines at this time.

16 Also we heard the message that the
17 silvicultural prescriptions were not consistent with
18 biodiversity protection. We believe the wording now
19 clearly indicates the consistency and that our
20 proposals can provide for sustainability of both
21 wildlife and fiber supply.

22 Therefore, keeping in mind that the
23 position of Forests for Tomorrow is that replacement of
24 the natural forest logged with one like it on most of
25 the landscape is what is desirable, the silvicultural

1 planning general principles 27(1), includes maintaining
2 biodiversity.

3 The silvicultural planning criteria,
4 28(1)(a) repeats the language of condition 54 regarding
5 protection of the components of biodiversity. That
6 these are intended as general guiding principles, not
7 rigid inflexible immutable rules should be more
8 apparent in the wording in the condition 29 which
9 indicates that:

10 "when developing silvicultural
11 prescriptions, the planning team shall
12 have regard to the principles of
13 conditions 27 and 28."

14 Not widely apply whatever the
15 circumstances, but have regard for.

16 As guidelines we continue to urge the use
17 of uniform shelterwood methods for red and white pine
18 as included in the MNR silvicultural guides for these
19 species.

20 In addition, Forests for Tomorrow has
21 amended the terms and conditions to remove the very
22 specific prescribed practices for black spruce, mixed
23 wood, including white spruce, and jack pine management
24 and for limited cut sizes.

25 . . . Rather consistent with the recommendation

1 of the Forestry Sectoral Task Force, whose report was
2 signed by Messrs. Boswell, Gruman, Balsillie, Quinney,
3 Gerry Woods of the CPU and Ms. Bernnain Lloyd of
4 Northwatch, consistent also with recommendations of
5 Drs. Welsh and Thompson, Forests for Tomorrow takes the
6 position that what is needed is establishment of a
7 range of sizes tending to small, for all the reasons
8 enumerated in our evidence and written in our argument,
9 sections both Mr. Lindgren and I have referred to
10 today, and small because we have an excess of large
11 cuts in the area of the undertaking. Hence, condition
12 29(2)(a)(i) which cites:

13 "In recognition of the historic
14 pattern of the contiguous cuts over large
15 areas a range of sizes potentially
16 different for different parts of the
17 province and site and species types, to
18 take account of the needs of biodiversity
19 including, for example, larger cuts for
20 habitat for area sensitive species."

21 Most important, with considerable
22 trepidation we are not prescribing absolute limits. We
23 have removed these specifications out of concern for
24 the issues of professional judgment and flexibility,
25 but our trepidation arises because of the question of

1 trust.

2 The guidelines are oriented to smaller
3 cuts to the extent compatible with the protection of
4 biodiversity. Here is the specific response to the
5 needs of area sensitive species and it joins the the
6 previous and continuing condition 32 which also
7 provides that opportunity.

8 The guidelines are oriented to recording
9 of larger cuts. Contrary to Ms. Cronk's comments, we
10 are not proposing a clearcut size limit of 100
11 hectares, rather that cuts over that size be recorded
12 and rationalized. The condition refers not only to a
13 range of acceptable individual clearcut sizes but also
14 contiguous clearcut sizes.

15 You have heard throughout FFT evidence
16 and argument our witnesses' concerns that the size of
17 an individual cut is only part of the concern, that
18 many individual cuts placed next to each other without
19 sufficient standing forest between them eventually
20 become one large cut.

21 Hence, the provision in the condition for
22 acceptable ranges for contiguous cuts as well,
23 including the essential component of that, the timing
24 of return cuts, and that's in condition 29(3)(a).

25 Now, confusion has ensued in these

1 hearings with regard to current clearcut sizes since
2 different parties use different definitions of what
3 constitutes a clearcut. Consider, for example, the MNR
4 reply evidence contrasted with the definition used in
5 the clearcut exercise.

6 Since, in the view of Forests for
7 Tomorrow, the clearcut exercise definition was arrived
8 at by all parties and contains the elements considered
9 essential to Forests for Tomorrow in a definition of
10 what constitutes a clearcut, we have proposed in
11 condition 29(ii) that the range of cut sizes to be
12 developed be based on the concepts used in the clearcut
13 exercise.

14 One last comment on the timing issue
15 which is in condition 33(a). It's an essential element
16 of Forests for Tomorrow's proposals to ensure we do not
17 create large contiguous cut-overs without regenerating
18 stands between them.

19 Now, I'd like to turn for a moment to the
20 evidentiary base for these proposals. It's not
21 essential for you as a Board, in the view of Forests
22 for Tomorrow, to decide on any particular term and
23 condition to require that a witness specifically
24 testified in support of that particular wording that
25 you may decide upon. What is essential, rather, is

1 that the evidence exist from which the Board, as
2 decision-maker, can conclude reasonably that a
3 particular condition responds to the issues of the
4 case.

5 We submit that you have heard voluminous
6 evidence about the related issues of harvest,
7 clearcutting, regeneration techniques together with the
8 need for the flexibility of foresters to exercise
9 professional judgment. You have also heard about the
10 issue of protection and biodiversity from witnesses for
11 Forests for Tomorrow, OFAH, in reply MNR, sufficiently
12 to assess the FFT conditions for biodiversity
13 protection, that's conditions 53 and 54, and to assess
14 whether the FFT silvicultural planning proposals
15 sufficiently integrate these concerns.

16 Specifically, Forests for Tomorrow has
17 arrived at these proposals based on the evidence of Dr.
18 Hutchinson, witnesses Marek, Benson Mazur, Smith,
19 Suffling, Bendell and Middleton. Elements of the
20 thinking of each, the testimony of each are encompassed
21 here together with elements arrived at through
22 participation in this process.

23 We submit that this is the proper role of
24 environmental assessment, to assist in narrowing
25 differences between parties and to arrive at solutions

1 that do not necessarily mirror the initial positions of
2 parties but, rather, result in the essential approaches
3 to long-term environmental protection.

4 Madam Chair, Mr. Martel, Forests for
5 Tomorrow has moved along in light of these proposals.
6 It is unfortunate, in our view, that the MNR case
7 managers and Industry have not made corresponding
8 moves.

9 As you have seen in the MNR written
10 argument and heard in our previous comments on clearcut
11 sizes, the MNR proposals to deal with these issues is
12 the environmental guidelines which, as described, offer
13 no assurance whatever, in our submission, of even any
14 intention to deal with these issues.

15 Forests for Tomorrow is deeply
16 disappointed at that continued intransigence but it
17 remains all that you have to consider with regard to
18 the Ministry's future actions on these crucial
19 interrelated issues of harvest, clearcut size,
20 regeneration techniques and biodiversity protection.

21 We, therefore, respectfully urge that you
22 accept Forest for Tomorrow's silvicultural proposals as
23 conditions to an approval to the undertaking.

24 With my additional 15 minutes from
25 yesterday I will now lurch through integrated

1 management in a considerably shortened form.

2 Madam Chair, Mr. Martel, our written
3 submissions on this issue are at Volume 1 of our
4 argument from page 38 forward.

5 You heard yesterday from Mr. Lindgren
6 submissions about some of the essential issues related
7 to integrated management, and that has to do with the
8 environmental assessment component. I think he said
9 absolutely everything there is to say on that subject.

10 I'd ask you to consider those submissions
11 as well when you're considering the question of
12 integrated management in condition 124.

13 Now, rather than summarizing our written
14 arguments on this point in which we have referred you
15 to the testimony of numerous witnesses, Dr.
16 Baskerville, George Nixon, Dr. Robert Payne, Dr. Jack
17 Ward Thomas and, of course, Mr. Smith.

18 And rather than reviewing that I'd like
19 to refer you to the testimony of Dr. Balsillie who
20 appeared before you at the very end of the case, who
21 indicated in response to Mr. Lindgren's
22 cross-examination that MNR will be going down the road
23 towards the capability of integrated forest management
24 by about 1995/96. And those words are in Volume 394,
25 at pages 67897.

1 Now, Forests for Tomorrow takes the
2 position that this represents a significant change on
3 the part of Ministry and, again, an opportunity for all
4 of us in this hearing to move towards integrated
5 management.

6 We reviewed in our written submissions
7 the criticisms that have been made of a non-integrated
8 approach from the witnesses that I cited a moment ago.
9 I'd like to recall for you that Mr. Smith was qualified
10 not only as a forest manager, forest resource manager
11 but also as an expert in organizational development in
12 large organizations. I suggest that he was sensitive
13 in his testimony here to being in a different
14 jurisdiction, he didn't come here to give lectures or
15 to ignore differences between the U.S. and Ontario, but
16 I submit that the process of organizational change that
17 he described that has occurred in the U.S. Forest
18 Service since the early 70s and the fact that it was
19 accomplished and is continuing, is an indication of the
20 type of change that could be fostered in the Ministry
21 and, in Forests for Tomorrow's submission, should be.

22 You heard extensive direct examination of
23 Mr. Smith regarding the U.S. approach and even more
24 extensive cross-examination. Much of that is
25 summarized in our evidence and in submissions. It is

1 important to emphasize that Forests for Tomorrow is not
2 proposing the importation of the U.S. forest planning
3 process, per se, into Ontario but rather some
4 significant elements of it. We have not written the
5 U.S. National Forest Management Act into our terms and
6 conditions, rather certain key elements.

7 And these are, 1): Issue-oriented
8 planning that defines and responds to public concerns
9 in a proactive way, not merely through inadequate
10 constraints.

11 2): An overall goal of responding to
12 public needs through not merely public consultation but
13 early and frequent public involvement.

14 3): Enhancement of resources, not mere
15 constraint management.

16 4): Consideration of cumulative effects
17 of timber management over time and space.

18 5): Interdisciplinary, not
19 multi-disciplinary planning in which the various
20 disciplines work out alternatives together and don't
21 rely on one individual to integrate them later.

22 And I might point out that is the whole
23 or opposite approach to the planning process proposed
24 by the OFIA. They've called their planning approach
25 integrated planning. In our submission it's not that.

1 6):...An examination of alternatives for
2 the land base.

3 7): Quality environmental analysis of
4 different approaches; and,

5 8: Attention to biodiversity and
6 protection of natural processes.

7 Now, Mr. Freidin has argued that the U.S.
8 plans are similar to the Ontario land use plans and, as
9 Mr. Lindgren argued to you yesterday, it's the position
10 of Forests for Tomorrow that this view does not reflect
11 reality, however, further in our submission it doesn't
12 really matter exactly how much detail Mr. Smith had
13 absorbed with regards to the Ontario planning system,
14 what's important is that he's an honest, credible
15 witness who explained to the Board the process that he
16 has worked with, a process whose differences from the
17 MNR one are obvious.

18 Again, it is elements of that process
19 that FFT is proposing for adoption in Ontario after a
20 five-year phase-in period, longer in fact than Dr.
21 Balsillie apparently thinks is necessary, elements to
22 be molded into a made-in-Ontario integrated forest
23 management planning process.

24 There are other indications as well that
25 the MNR leadership is ready and capable of doing this

1 found in Direction 90 which also refers to a need for
2 integrated planning and in Sustainable Forestry
3 Initiatives.

4 However, it is the submission of Forests
5 for Tomorrow that for the Board to conclude that it
6 should decline to order this change since the
7 government is going to do it anyway would be most
8 undesirable, and I want to leave you with three reasons
9 for that position.

10 First, the MNR is a large institution and
11 the Industry is a large and complex system of
12 companies, plants and operations. Change in large
13 institutions is difficult and slow to achieve. Should
14 the Board grant an approval, whatever the conditions,
15 these two large organizations will need to adapt to the
16 change, they'll need time to adapt, time during which
17 environmental protection changes will only slowly be
18 enacted.

19 And I want to recall to you that it is
20 now 17 years since the Environmental Assessment Act was
21 passed and timber management, originally called forest
22 management, has operated with an exemption during all
23 that time and continues to do so. It is an absolute
24 priority for Forests for Tomorrow that adequate
25 environmental protection be put in place as soon as

1 possible and that these proposals will move us to the
2 best environmental protection, that is, proposal for
3 integrated management.

4 Secondly, it would be more fair to both
5 the Ministry and the Industry to set out the parameters
6 of change now rather than set out a path for them which
7 may require further change later if the government does
8 in fact move to integrated management, as Dr. Balsillie
9 indicates, by 1995 to 96.

10 We wish to reiterate here that we're not
11 here to offer unreasonable criticism of the two, the
12 Industry and the Ministry, but to secure better
13 environmental practices in the forest. My clients will
14 be continuing to work with both parties after this
15 hearing. They wish to minimize the disagreements and
16 have a clear direction.

17 It's our submission that it's time to
18 take a long-term view on this question. Let's move now
19 down the proper path and not have MNR and the Industry
20 institute changes in accordance with a limited approach
21 to timber management planning which they will then need
22 to amend further for the purposes of integrated
23 management.

24 Thirdly, there's no assurance that Dr.
25 Balsillie's prediction will necessarily come into

1 effect. It appears that it will. However, as we've
2 seen during this hearing, government policies change,
3 governments change and three years can make a great
4 difference in governmental directions.

5 We consider that it is most unfortunate
6 the MNR case managers did not provide you, in addition
7 to Dr. Balsillie's late testimony, with more
8 information about the move within the Ministry to
9 integrated management. Nevertheless, you do have
10 evidence that is within reach that the Minister
11 considers it necessary, in Direction 90 and the
12 Sustainable Forestry Initiatives. We urge you to
13 consider that in reaching your decision in the hearing.
14 We wish to emphasize that should the decision in this
15 case entrench the status quo so as to render
16 change-oriented policy within the Ministry less likely
17 to succeed, the public will have been poorly served
18 through this long and costly exercise.

19 Now, we have seen consistent
20 manifestation of the Board's sensitivity to public
21 concerns throughout these four years. We submit that
22 all of these concerns are better addressed and public
23 involvement more comprehensive in an integrated
24 management scheme than in a limited MNR approach to
25 timber management planning.

1 Forests for Tomorrow's proposal in
2 condition 124 again provides five years for the
3 Ministry to kraft with public participation a
4 made-in-Ontario scheme for integrated management within
5 the area of the undertaking. It is a reasonable
6 non-dictatorial proposing offering the Ministry great
7 flexibility in design.

8 To ensure that integrated management is
9 achieved with maximum fairness to all parties, we
10 respectfully urge you, should you grant a conditional
11 approval to the proponent, to include FFT condition 124
12 as an element of that approval.

13 That concludes our submissions, Madam
14 Chair, Mr. Martel. It's now my privilege on my own
15 behalf, that of Mr. Lindgren and Mr. Castrilli and our
16 clients to thank you for your attention and
17 consideration of our evidence and submissions through
18 this long hearing.

19 We will now await the decision.

20 MADAM CHAIR: Thank you very much, Ms.
21 Swenarchuk and Mr. Lindgren, and we appreciate all your
22 hard work and thank you very much.

23 ---Whereupon the hearing was adjourned at 4:10 p.m.,
24 to be reconvened on Wednesday, October 28th, 1992,
 commencing at 9:00 a.m.

25 [BD/MC]



